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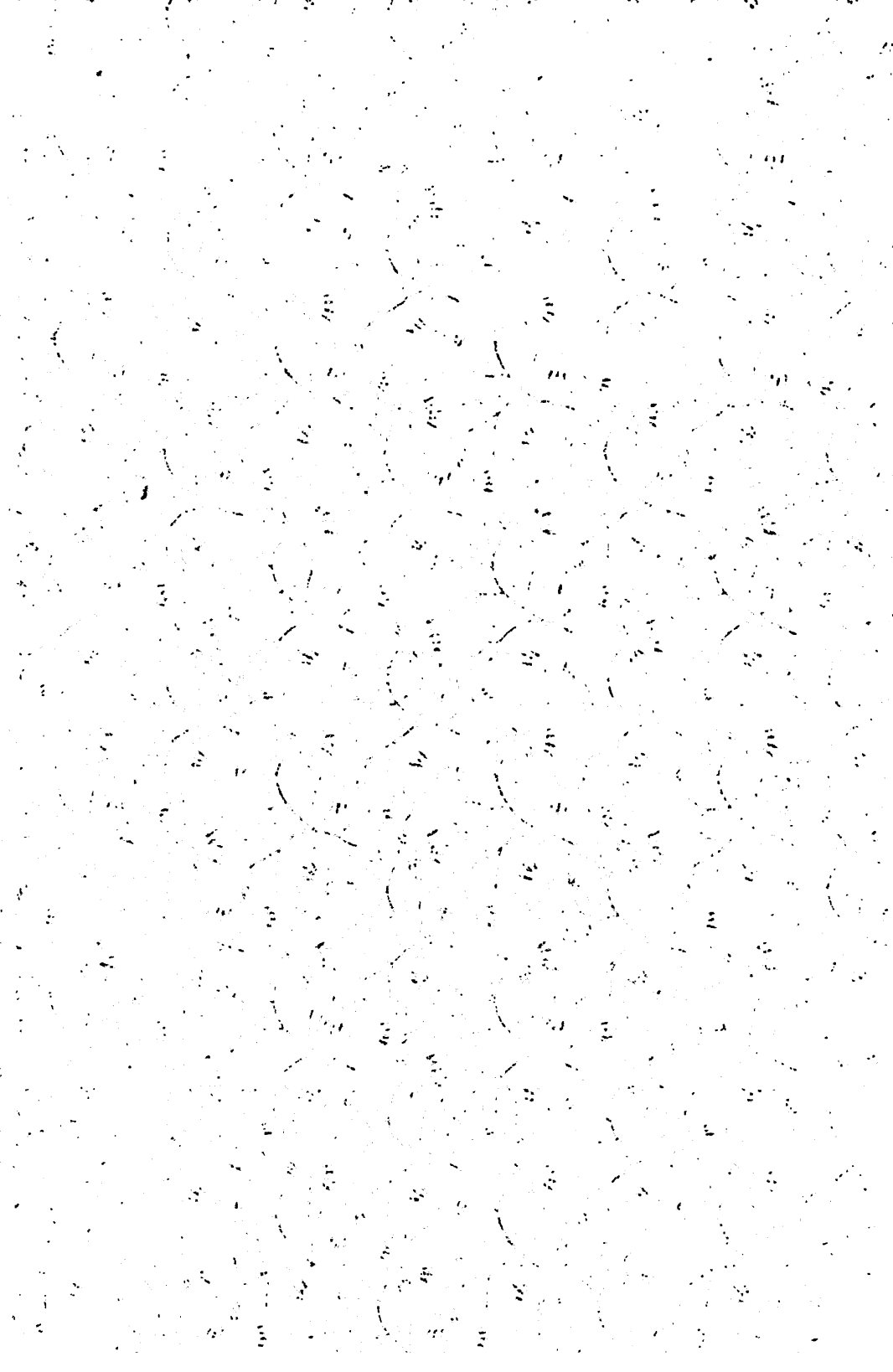
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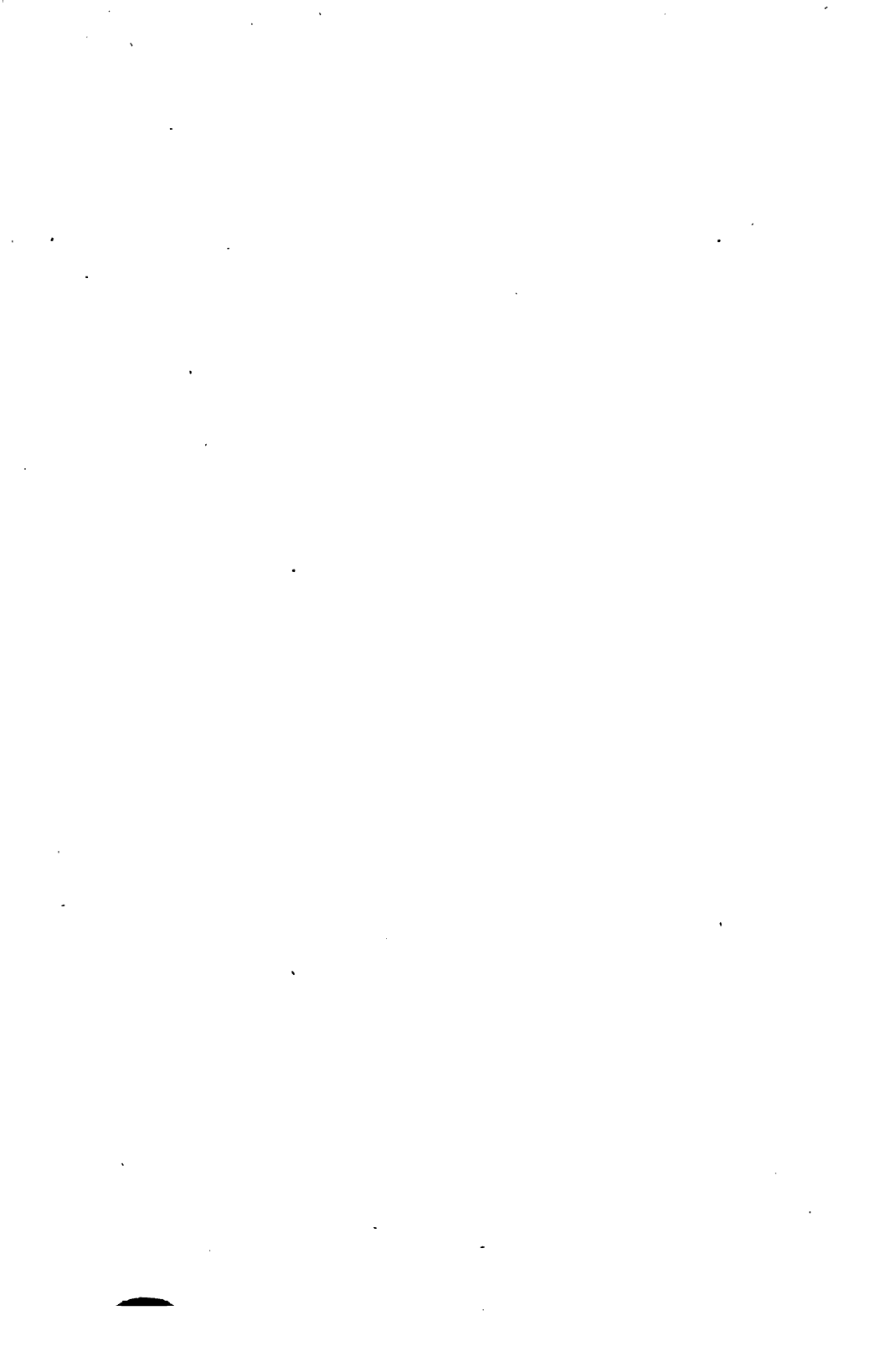
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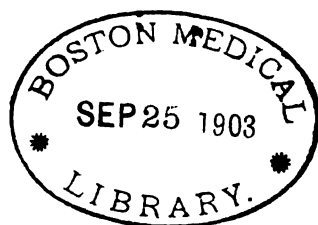
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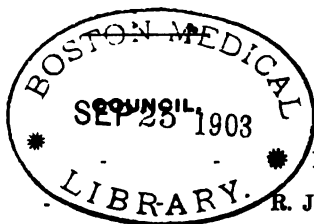
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AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

CONSTITUTION.

ARTICLE I.

This organization shall be known as the AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION, this name being adopted in 1892 by "The Association of Medical Superintendents of American Institutions for the Insane," founded in 1844.

ARTICLE II.

The object of this Association shall be the study of all subjects pertaining to mental disease, including the care, treatment, and promotion of the best interests of the insane.

ARTICLE III.

There shall be four classes of members: (1) Active members, who shall be physicians, resident in the United States and British America, especially interested in the treatment of insanity; (2) Associate members; (3) Honorary members; and (4) Corresponding members.

ARTICLE IV.

The officers of the Association shall consist of a President, Vice-President, Secretary—who shall also be the Treasurer—two Auditors, and twelve other members of the Association to be called Councilors; all of these officers together shall constitute a body which shall be known as the Council.

NOTE.—The Association of Medical Superintendents of American Institutions for the Insane was founded in 1844 by the original thirteen members. In 1891, when its membership had increased to more than two hundred, it was proposed, at the annual meeting of that year in Washington, to form a better organization of the Association—its work having previously been done under the somewhat unstable rules of custom and a few resolutions scattered through its records. The proposition was agreed to, and at the annual meeting in Washington, in 1892, there was unanimously adopted this Constitution and By-Laws, with the change of name to the AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

ARTICLE V.

The Active members of the Association shall include all past and present medical superintendents named in the official list published for 1892 of members of "The Association of Medical Superintendents of American Institutions for the Insane;" the Honorary members shall include those so designated in that list; the Associate members shall include all the assistant physicians named in the same list; it being provided that said list shall be corrected by the Council, as may be necessary to carry out the intentions of the Constitution as to the continuance of existing membership.

Every candidate for admission to the Association hereafter, in either of the three above-named classes of members; or as a Corresponding member, shall be proposed in writing to the Council, in an application addressed to the President, at least two months prior to the meeting of the Association, with a statement of the candidate's name and residence, professional qualifications, and any appointments then or formerly held, and certifying that he is a fit and proper person for membership. In the case of a candidate for Active or Associate membership, the application shall be signed by three Active members of the Association; and by six Active members for the proposal of an Honorary or Corresponding member. The names of all candidates approved by a majority vote of members of the Council present at its annual meeting, shall be presented on a written or printed ballot to the Association at its concurrent annual meeting, at least one session previous to that at which the election is made, which shall be by ballot at a regular session, and require a majority vote of the members present.

Physicians who, by their professional work or published writings, have shown a special interest in the care and welfare of the insane, are eligible to Active membership.

The only persons eligible for Associate membership are regularly appointed assistant physicians of institutions for the insane that are regarded to be properly such by the Council; and they are eligible for such membership only during the time they are holding such appointments. After holding such an appointment three years, an Associate member may become an Active member by making application in writing to the Council, and

upon its approval, being elected in the manner heretofore prescribed.

ARTICLE VI.

Physicians and others who have distinguished themselves by their attainments in branches of science connected with insanity, or who have rendered signal service in philanthropic efforts to promote the interests of the insane, shall be eligible for Honorary membership.

Physicians not resident in the United States and British America, who are actively engaged in the treatment of insanity, may be elected Corresponding members.

Active members only shall be entitled to a vote at any meeting, or be eligible to any office. Honorary and Corresponding members shall be exempt from all payments to the Association.

ARTICLE VII.

Any member of the Association may withdraw from it on signifying his desire to do so in writing to the Secretary, provided that he shall have paid all his dues to the Association. Any member who shall fail for three successive years to pay his dues, after special notice by the Treasurer, shall be regarded as having resigned his membership, unless such dues shall have been remitted by the Council for good and sufficient reasons.

Any member who shall be declared unfit for membership by a two-thirds vote of the members of the Council present at an annual meeting of that body shall have his name presented by it for the action of the Association, from which he shall be dismissed if it be so voted by two-thirds of the members present at its annual meeting.

ARTICLE VIII.

The Officers and Councilors shall be elected at each annual meeting. They shall be nominated to the Association on the second day of the annual meeting in the order of business of the first session of that day, by a committee appointed for that purpose by the President; and the election shall take place immediately. The election shall be made as the meeting may determine, and the person who shall have received the highest number of votes shall be declared elected to the office for which he has been nominated.

The President, Vice-President, the Secretary and Treasurer, and Auditors, shall hold office for one year or until the beginning of the term for which their successors are elected. The Secretary and Treasurer and one Auditor are eligible for re-election. At the first election of Councilors, four members shall be elected for one year, four for two years, and four for three years; and thereafter four members shall be elected each year to hold office three years, or until their successors are elected. The President, Vice-President, one Auditor, and the four retiring Councilors are ineligible for re-election to their respective offices for one year immediately following their retirement. All the Officers and Councilors shall enter upon their duties immediately after their election, excepting the President and Vice-President. When any vacancies occur in any of the offices of the Association, they shall be filled by the Council until the next annual meeting.

A quorum of the Council shall be formed by six members; and of the Association by twenty Active members.

ARTICLE IX.

The President and Vice-President for the year shall enter on their duties at the close of the business of the annual meeting at which they are elected. The President shall prepare an inaugural address, to be delivered at the opening session of the meeting. He shall preside at all the annual or special meetings of the Association or Council, or in his absence at any time, the Vice-President shall act in his place.

The Secretary and Treasurer shall keep the records of the Association and perform all the duties usually pertaining to that office, and such other duties as may be prescribed for him by the Council; and under the same authority he shall receive and disburse and duly account for all sums of money belonging to the Association. He shall keep accurate accounts and vouchers of all his receipts and payments on behalf of the Association, and of all invested funds, with the income and disposition thereof, that may be placed in his keeping, and shall submit these accounts, with a financial report for the preceding year, to the Council at its annual meeting. Each annual statement shall be examined by the Auditors, who shall prepare and present at each annual meeting of the Association a report showing its financial

condition. The Council shall have charge of any funds in the possession of the Association, and which shall be invested under its direction and control. The Council shall keep a careful record of its proceedings and make an annual report to the Association of matters of general interest. The Council shall also print annually the proceedings of the meetings of the Association and the reports of the Treasurer and Auditors.

The Council is empowered to manage all the affairs of the Association, subject to the Constitution and By-Laws; to appoint committees from the membership of the Association, and spend money out of its surplus funds for special scientific investigations in matters pertaining to the objects of the Association; to publish reports of such scientific investigations; to apply the income of special funds at its discretion, to the purposes for which they were intended. The Council may also engage in the regular publication of reports, papers, transactions and other matters, in an annual volume, or in a journal, in such manner and at such time as the Council may determine, with the approval of the Association.

ARTICLE X.

Amendments to the Constitution and By-Laws shall be taken up for consideration at the first session of the second day of any annual meeting, and may be made by a two-thirds vote of all the members present, provided that notice of such proposed amendments be given in writing at the annual meeting next preceding. It shall be the duty of the Secretary to send to all the members a copy of any proposed amendment at least three months previous to the meeting when the action is to be taken.

BY-LAWS.

ARTICLE I.

The meetings of the Association shall be held annually. The time and place of each meeting shall be named by the Council, and reported to the Association for its action at the preceding meeting. Each annual meeting shall be called by printed announcement sent to each member at least three months previous to the meeting.

The Council shall hold an annual meeting concurrent with the annual meeting of the Association; and the Council shall hold as many sessions and at such times as the business of the Association may require.

Special meetings of the Council may be called by the order of the Council. The President shall have authority at any time, at his own discretion, to instruct the Secretary to call a special meeting of the Council; and he shall be required to do so upon a request signed by six members of the Council. Such special meetings shall be called by giving at least four weeks written notice.

ARTICLE II.

Each and every Active and Associate member shall pay an annual tax to the Treasurer, the amount to be fixed annually by the Council, not to exceed five dollars for an Active member, or two dollars for an Associate member.

ARTICLE III.

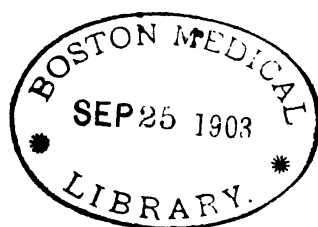
The order of business of each annual meeting of the Association shall be determined by the Council, and shall be printed for the use of the Association at its meeting. The Council shall also make all arrangements for the meetings of the Association, appointing such auxiliary committees from its own body, or from other members of the Association, and making such other provision as shall be requisite, at its discretion.

NOTE.

The accompanying volume containing the proceedings, papers and discussions of the American Medico-Psychological Association at its Fifty-sixth Annual Meeting, is printed by the Council with the approval of the Association.

C. B. BURR,
Secretary.

Flint, Mich., October 1, 1900.



AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION.

PROCEEDINGS OF THE FIFTY-SIXTH ANNUAL MEETING.

TUESDAY, MAY 22, 1900.

FIRST SESSION.

The Association convened at 10 o'clock a. m. in the convention hall of the Hotel Jefferson, Richmond, Virginia, and was called to order by the Chairman of the Committee of Arrangements, Dr. Benjamin Blackford, of Staunton.

Prayer was offered by the Reverend Dr. Downman, rector of All Saints church.

Dr. Blackford introduced the Honorable J. Hoge Tyler, Governor of Virginia, who addressed the Association as follows:

Mr. President, Ladies and Gentlemen: You come to our beautiful city as she has closed a week of rejoicing and witness her healthful bounds to prosperity. Her river and harbor are to be improved; her ship-building, now in its infancy, promises to rival that on the banks of the Clyde; her machine-works and factories are throbbing with new life, and her people are buoyant with expectation and hope.

It is my pleasant privilege to express in a few words the welcome and cordial greeting our people are ready to extend to you. Around our State and its historical capital city cluster many memories that stir the heart and mind. During your stay we trust that you will look upon our quaint old capitol building whose walls have echoed the voice of sage and orator, where the laws of the Old Commonwealth have been framed and a confederacy was cradled. Glance from the windows and you will see imaged in bronze the immortal Washington, and around him a group of illustrious Virginians, who not only made fame for their State, but laid broad and wide the foundations of the American Republic. Look to the right and you see a martial figure whose deeds of valor won from English admirers a statute of bronze. Down the gentle slope of the capitol hill you will find a monument to the man who uttered the noble sentiment, that he would rather "be right than be President."

You can stand on Church hill in old St. John's, where Patrick Henry uttered that deathless sentiment of liberty or death. Near by, on its beautiful site, towering high in the heavens, stands the monument to the soldiers and sailors of the confederacy. On the western border of our city rises in monumental splendor the image of Robert E. Lee, "A soldier without cruelty and a victim without murmuring." In the tranquil shades of Hollywood you will see the pyramid of granite erected to Pickett and his men. Near by, on the banks of the James, "Where the dip of the waters is heard in the night," has been placed, by the side of her illustrious father, the pure, angelic figure of the winsome "Flower of the Confederacy," all the result of the labors of our noble Southern women. With these and many other points of interest, I trust you will find much to charm and interest you.

From the hurried glance I was able to give the subject, I find your Association is the successor of the oldest medical organization in America. In this age of progress, it must be most gratifying to you as an Association, as it is to all the people, that your profession has kept in the vanguard. "Who can minister to a mind diseased?" was questioned by a master mind, and you, gentlemen, and your profession, have done much to solve the problem. As the result of your deliberations each year, those upon whom the hand of affliction has been laid will experience benefit and comfort.

We are glad to welcome such a representative body, coming from such a wide section. The gates of the city and the hearts of all the people are open to welcome you. Thrice welcome to our State and homes.

Dr. Blackford then introduced the Honorable R. M. Taylor, Mayor of the City of Richmond, who welcomed the Association in behalf of the city in the following words:

Mr. President, Ladies and Gentlemen: Your selection of our beautiful city for your annual meeting gives me the opportunity of thanking you in behalf of our citizens for the honor you have bestowed upon us. Your calling is allied with the tenderest affections of the human family and we claim, as a part of that family, that our sympathies are always with the afflicted and distressed. We know the kindly ministrations of the gentle physician, for with us live the tenderest and the best, and your coming amongst them for your deliberations shows us that our estimate of them is well grounded. I will not however enter into details, but simply confine myself to my mission as Mayor of welcoming you to our city and homes, with God's blessing upon your noble work. May your deliberations be both pleasant and profitable.

Dr. Blackford next introduced Dr. John N. Upshur, of Richmond, who gave the following address of welcome on behalf of the medical profession of the city:

Mr. President, Ladies and Gentlemen: On behalf of the medical profession of the Old Dominion and our capital city, I give you cordial greeting. We feel honored that you have come to hold this annual meeting amongst us, and we feel doubly honored that you have seen fit to grace this occasion by bringing with you so many representatives of your fair women. We feel that there is much here to excite your interest, in this capital city of Rich-

mond, located as it is on the northern bank of the James, with traditions extending from colonial times down to the present day. The stream that runs below yonder hill was the site of a bloody Indian battle and has taken the name of Bloody Run. It was in those days that the Anglo-Saxon conquered the Indian and showed what was to be expected of the Anglo-Saxon blood. Later, in this State, we have the Revolutionary traditions, when Cornwallis surrendered and gave birth to this immortal land. And still later, below this town, there was fought and finished that dire test of civil conflict, where brother sought the life of brother and each battled for what he conceived to be the right. And now upon this western slope in lovely Hollywood there sleep the Confederate dead, and on the eastern side of this city in the National cemetery, under the care of a paternal government, there sleep those who were locked in fatal conflict with these men. There on these peaceful hills they keep the silent bivouac of the dead. And to us whose faces were turned toward the setting sun, with eyes bedimmed with tears, with despondency we turned our backs upon the west and with our heads hanging in sorrow over a lost cause we faced the east and saw there rising the morning sun. As the warrior's banner took its flight to greet the warrior's soul, there came a mental throb from the heroes who sleep their long sleep and from the sons of Old Virginia who feel a double portion of the spirit of these men, which has found its earnest in the enterprise, the courage and the thrift which today make the mills and the factories of this town beat sweet music to the march of progress. But, sirs, I cannot stop to dwell upon a theme so grateful to a citizen of Richmond as what Richmond has done. It seems but fitting that you should meet here on this your third visit to the State. Pardon me for a moment if I say that we have energy and progress and earnest devotion to the cause of peace, that while we are not so great and our area is not so large, and while perhaps we might pale as compared with some of the cities in other parts of the land, we still claim that

"The lily is as perfect as the oak;
The myrtle is as fragrant as the pine;
And Sharon's roses are as beautiful
As Lebanon, majestic, cedar crowned."

It was in this Old Commonwealth that the first asylum was instituted in 1769, at Williamsburg, and Virginia has cared for her insane with the earnestness and the tenderness of a mother from that day to this, and now at Staunton and Marion and Petersburg, as well as at Williamsburg, are State hospitals for the care of our insane. We remember too that in this State lived one of the thirteen original members of this Society. And I would charge you that the dignity and responsibility of your branch of medicine finds its culmination in this age of progress and an increased responsibility because of the advance of medical science. No longer do we sit under the opprobrium of having to answer in the negative, "Canst minister to a mind diseased?" and hear the sneer "Throw physic to the dogs," because in the progress of medicine, the strides which have been made in gynecology and surgery, to say nothing of modern internal medicine, you have found many causes which dethrone reason and are able to apply many remedies which are successful in restoring it to its balance, thereby giving back to society

useful and happy lives. You are abreast, I know, with the progress in other branches of medicine, for while you deal with the subtle and intangible, because the causes you have to handle are often more hidden than fall to our lot, you have improved methods of investigation. But I bid you God speed and I hope this meeting may be to you both profitable and pleasant. I can assure you that our hearts and homes are open to you. And we trust you will find it so pleasant that when you leave us to return to your homes you will feel that you wish to return to us again.

President Rogers responded as follows:

Gentlemen: On behalf of the Association, I thank you. The welcome of the mother of States, of its time-honored and beautiful capital city, and of its renowned medical faculty, so graciously tendered by honorable representatives, is accepted with sentiments of earnest appreciation. We, individually and collectively, intend to feel for the week of our sojourn in your midst (and doubtless for some time after) that every man of us is a Virginian, by virtue of your hospitable adoption, if by no other title. Some of us are Virginians—I myself was one about one hundred and twenty years ago and am proud of it, always have been, and always will be. "To be a Roman citizen is greater than to be a king."

We are from the north, south, east, and west and Canada, but were all glad when the cry was raised in our council last year, "On to Richmond," and come, not with malign intent, but with outstretched hand to meet your grasp of welcome.

The American Medico-Psychological Association is the oldest continental society of medical men in America and I dare say is as respectable as any other, if not more so. Though old, as a body, there is plenty of young blood in it—and more coming; the transfusion is constant from pure sources and well sterilized. Its motto is *Excelsior* and its record justifies it. The practical work of its members is largely the care of the insane, of whom there are one hundred and twenty thousand in the land in more than one hundred and fifty widely-scattered hospitals, representing a vast expenditure of many millions, manned with more than fifteen thousand attendants and nurses, many of whom are enjoying the advantage of special training in the hospital schools established for this purpose. We have been criticised as routinists and as being neglectful of the great wealth of clinical material in our hands; yet Dr. Prudden, of New York, who is certainly good authority, states in a recent address bearing on this point, that the laboratories of our institutions for the insane are taking the lead, as a rule, in the matter of both clinical and pathological work. That research, record, and publication are being diligently maintained by the Association is well shown by its Annual Transactions, its quarterly *Journal of Insanity*, and by current medical literature. For more immediate practical results, we have to offer from twenty to forty per cent. of recoveries on the number annually admitted and, what is equally important, continuous care and control to the end of life of thousands who would otherwise multiply and people the land with degenerates.

Self praise, however, is always a painful duty, and therefore I will conclude by again thanking you for your kind words and promising that we will be good and faithful guests while with you.

The Secretary read letters from the Westmoreland, the Commonwealth, and the Albemarle Clubs, extending the privileges of these clubs to members, also from Dr. P. B. Baringer, Chairman, on behalf of the Faculty, inviting the Association to visit the University of Virginia; also from the ladies of the Confederate Memorial and Literary Society to visit the museum of the society.

The Secretary reported that the Council had recommended the following applications for membership:

For Active Membership.—Dr. Daniel H. Arthur, Gowanda, N. Y.; Dr. John A. Beauchamp, Nashville, Tenn.; Dr. W. F. Becker, Milwaukee, Wis.; Dr. J. Clement Clark, Catonsville, Md.; Dr. Allen R. Defendorf, Middletown, Conn.; Dr. Hiram Elliott, Troy, N. Y.; Dr. Everett Flood, Palmer, Mass.; Dr. Charles M. Franklin, Towson, Md.; Dr. Frank R. Fry, St. Louis, Mo.; Dr. Alfred T. Gundry, Catonsville, Md.; Dr. Wm. Hirsch, New York, N. Y.; Dr. Chas. W. Hitchcock, Detroit, Mich.; Dr. Emily P. Howard, Boston, Mass.; Dr. W. M. Knowlton, Brookline, Mass.; Dr. Chas. H. Langdon, Poughkeepsie, N. Y.; Dr. Chas. H. Latimer, St. Elizabeth, D. C.; Dr. J. M. Lewis, Cleveland, Ohio; Dr. W. P. Manton, Detroit, Mich.; Dr. John H. Nichols, Tewksbury, Mass.; Dr. H. L. Palmer, Utica, N. Y.; Dr. Wm. P. Spratling, Sonyea, N. Y.

For Associate Membership.—Dr. W. Herbert Adams, Danville, Pa.; Dr. Edward A. Andrews, Harding, Mass.; Dr. Susanna P. Boyle, Independence, Ia.; Dr. Walter H. Conley, Buffalo, N. Y.; Dr. J. H. Garlick, Petersburg, Va.; Dr. Horatio Gates Gibson, Jr., Ward's Island, N. Y.; Dr. J. M. Henderson, Petersburg, Va.; Dr. Erving Holley, Willard, N. Y.; Dr. Henry I. Klopp, Westboro, Mass.; Dr. Chas. T. LaMoure, Rochester, N. Y.; Dr. Wm. W. Rucks, Nashville, Tenn.; Dr. E. G. Stout, Utica, N. Y.

Letters were read by the Secretary from Honorary Members Drs. A. Ritti, J. B. Spence, A. R. Urquhart, and Henry Hun.

The following report was read:

To the American Medico-Psychological Association:

I beg leave to present the following report:

C. B. Burr, Treasurer, in account with the American Medico-Psychological Association.

<i>Debits</i> —Balance, May 1, 1899	\$458 95
Certificate of deposit outstanding May 1, 1899...	500 00
Certificate of deposit (see credits)	400 00
Dues from Active members	1,143 00
Dues from Associate members	184 00
Interest on certificates of deposit	25 86
Sale of Blackburn's Autopsies	1 00
Sale of Transactions	6 75
Sale of Index of names	50
	<hr/>
	2,715 06
<i>Credits</i> —Printing Transactions, lists of members, reprints.	\$676 67
Miscellaneous printing (programs, announcements, ballots, receipts, etc.)	95 10
Stationery and rubber stamps	33 40
Hall rent, Waldorf-Astoria	100 00
Railroad instructions to delegates	1 00
Postage and revenue	149 80
International Year Book	8 20
Cuts for Transactions	25 50
Registry cards and cabinet	6 75
Stenographer and clerical hire	115 22
Telegraph, telephone and express	12 80
Miscellaneous	8 00
Certificate of deposit (see debits)	400 00
Certificate of deposit outstanding	1,000 00
Certificate of deposit outstanding	50 00
Balance in First National Bank, May 1, 1900....	42 62
	<hr/>
	2,715 06

It will be observed that the Association is in a prosperous condition financially. It has no debts, and had on hand May 1, 1900, \$1,092.62 in certificates of deposit and cash.

Very respectfully,

C. B. BURR,
Treasurer.

On motion the report was accepted and referred to the auditing committee.

On motion of Dr. Blackford the members of the medical profession of the City of Richmond and the members of the Boards of Directors of the State Hospitals were invited to participate in the proceedings of the sessions of the Association.

The President appointed the following Nominating Committee: P. L. Murphy, of North Carolina; N. H. Beemer, of Ontario; F. C. Hoyt of Iowa; D. R. Burrell, of New York; H. L. Orth, of Pennsylvania.

A recess was then taken for the purpose of registration.

The following members were present during a whole or portion of the session:

George S. Adams, Superintendent Westborough Insane Hospital, Westborough, Mass.

H. D. Allen, Superintendent Allen's Invalid Home, Milledgeville, Ga.

H. E. Allison, Medical Superintendent Matteawan State Hospital, Fishkill-on-Hudson, N. Y.

C. P. Bancroft, Superintendent New Hampshire Asylum for Insane, Concord, N. H.

N. H. Beemer, Medical Superintendent Asylum for the Insane, Mimico, Ont.
William F. Beutler, Superintendent Asylum for Chronic Insane, Wauwatosa, Wis.

Benjamin Blackford, Superintendent Western State Hospital, Staunton, Va.

G. Alder Blumer, Medical Superintendent Butler Hospital for the Insane, Providence, R. I.

Edward N. Brush, Physician-in-Chief and Superintendent Sheppard and Enoch Pratt Hospital, Towson (Station A, Baltimore), Md.

Lewis L. Bryant, City Physician, Cambridge, Mass.

J. M. Buchanan, Superintendent East Mississippi Insane Hospital, Meridian, Miss.

Richard Maurice Bucke, Medical Superintendent Asylum for Insane, London, Ont. (*President, 1898.*)

D. R. Burrell, Resident Physician Brigham Hall, Canandaigua, N. Y.

T. J. W. Burgess, Medical Superintendent Protestant Hospital for Insane, Montreal, Que.

C. B. Burr, Medical Director Oak Grove Hospital for Mental and Nervous Diseases, Flint, Mich. (*Secretary and Treasurer.*)

Eugene G. Carpenter, Superintendent Columbus State Hospital, Columbus, Ohio.

John B. Chapin, Physician-in-Chief Pennsylvania Hospital for the Insane, 4401 Market St., Philadelphia, Pa.

Fred Bennett Colby, Assistant Physician Boston Insane Hospital, New Dorchester, Mass.

G. F. Cook, Superintendent Oxford Retreat, Oxford, Ohio.

Richard Dewey, Physician-in-Charge Milwaukee Sanitarium, Wauwatosa, Wis. (*President, 1896.*)

William Elliot Dold, Medical Superintendent Oakwood Sanitarium, Lake Geneva, Wis.

Charles A. Drew, Medical Director Massachusetts State Asylum for Insane Criminals, State Farm, Mass.

William F. Drewry, Superintendent Central State Hospital, Petersburg, Va.

George F. Edenharter, Medical Superintendent Central Indiana Hospital for Insane, Indianapolis, Ind.

J. F. Edgerly, Superintendent Pennsylvania Epileptic Hospital and Colony Farm, Oakbourne, Pa.

William M. Edwards, Medical Superintendent Michigan Asylum for the Insane, Kalamazoo, Mich.

Robert M. Elliott, Superintendent Long Island State Hospital, Flatbush, Brooklyn, N. Y.

Britton D. Evans, Medical Director New Jersey State Hospital, Morris Plains, N. J.

Orpheus Everts, Superintendent Cincinnati Sanitarium, College Hill, Ohio.

Henry C. Eyman, Medical Superintendent Massillon State Hospital, Massillon, Ohio.

James F. Ferguson, Physician-in-Charge, Falkirk, Central Valley, N. Y.

Edward French, Superintendent Medfield Insane Asylum, Harding or Medfield, Mass.

James H. Garlick, First Assistant Physician Central State Hospital, Petersburg, Va.

Arthur V. Goss, First Assistant Physician Taunton Insane Hospital, Taunton, Mass.

Alfred T. Gundry, Attending Physician Mrs. Gundry's Sanitarium, Catonsville, Md.

Richard F. Gundry, Superintendent The Richard Gundry Home, Catonsville, Md.

L. V. Guthrie, Superintendent Second Hospital for Insane, Spencer, W. Va.

William H. Hancker, Superintendent Delaware State Hospital, Farnhurst, Del.

F. W. Harmon, Superintendent Longview Hospital, Carthage Ohio.

Arthur H. Harrington, Superintendent Danvers Insane Hospital, Hathorne, Mass.

Isham G. Harris, Assistant Physician Hudson River State Hospital, Poughkeepsie, N. Y.

W. H. Hattie, Medical Superintendent Nova Scotia Hospital for the Insane, Halifax, N. S.

Gershom H. Hill, Superintendent Hospital for Insane, Independence, Ia.

J. M. Henderson, Assistant Physician Central State Hospital, Petersburg, Va.

Livingston S. Hinckley, Superintendent Essex County Hospital for the Insane, Newark, N. J.

Aug. Hoch, Assistant Physician McLean Hospital, Waverley, Mass.

J. A. Houston, Medical Superintendent Northampton Insane Hospital, Northampton, Mass.

Emily Pagelson-Howard, Trustee of Boston Insane Hospital, Boston, Mass.

Eugene H. Howard, Medical Superintendent Rochester State Hospital, Rochester, N. Y.

Herbert B. Howard, State Board of Insanity of Massachusetts, Massachusetts General Hospital, Boston, Mass.

- Frank C. Hoyt, Medical Superintendent Iowa Hospital for Insane, Mt. Pleasant, Ia.
- Arthur W. Hurd, Medical Superintendent Buffalo State Hospital, Buffalo, N. Y.
- Henry M. Hurd, Superintendent The Johns Hopkins Hospital, Baltimore, Md. (*President, 1899.*)
- Richard H. Hutchings, First Assistant Physician St. Lawrence State Hospital, Ogdensburg, N. Y.
- George F. Jelly, Member State Board of Insanity, formerly Superintendent McLean Hospital, 69 Newbury St., Boston, Mass.
- Walter H. Kidder, Assistant Physician Saint Lawrence State Hospital, Ogdensburg, N. Y.
- J. J. Kindred, Physician-in-Charge River Crest Sanitarium, Astoria, L. I., N. Y.
- Edward B. Lane, Superintendent Boston Insane Hospital, New Dorchester, Mass.
- J. M. Lewis, ex-Superintendent Cleveland State Hospital, Cleveland, Ohio.
- William Mabon, Medical Superintendent St. Lawrence State Hospital, Ogdensburg, N. Y.
- A. E. Macdonald, Superintendent Manhattan State Hospital East, Ward's Island, N. Y.
- John F. Miller, Superintendent State Hospital, Goldsboro, N. C.
- W. P. Manton, Gynecologist Eastern and Northern Michigan Asylums and St. Joseph's Retreat, Detroit, Mich.
- T. J. Mitchell, Superintendent Mississippi State Insane Hospital, Jackson, Miss.
- R. F. Monette, Assistant Physician Manhattan State Hospital West, Ward's Island, New York, N. Y.
- Dwight S. Moore, Superintendent North Dakota Hospital for Insane, Jamestown, N. D.
- J. M. Mosher, 202 Lark St., Albany, N. Y.
- A. R. Moulton, Senior Assistant Physician Pennsylvania Hospital for Insane, 49th and Market Sts., Philadelphia, Pa.
- P. L. Murphy, Superintendent State Hospital at Morganton, Morganton, N. C.
- H. L. Orth, Superintendent and Physician Pennsylvania State Hospital, Harrisburg, Pa.
- Charles, W. Page, Medical Superintendent Connecticut Hospital for Insane, Middletown, Conn.
- Charles W. Pilgrim, Medical Superintendent Hudson River State Hospital, Poughkeepsie, N. Y.
- T. O. Powell, Superintendent Georgia State Sanitarium, Milledgeville, Ga. (*President, 1897*)
- R. J. Preston, Superintendent Southwestern State Hospital, Marion, Va.
- A. B. Richardson, Superintendent Government Hospital for Insane, St. Elizabeth, D. C.
- David D. Richardson, Resident Physician State Hospital Southeastern District Pennsylvania, Norristown, Pa.

Joseph G. Rogers, Medical Superintendent Northern Indiana Hospital for the Insane, Logansport, Ind. (*President.*)

Edward C. Runge, Medical Superintendent St. Louis Insane Asylum, St. Louis, Mo.

James Russell, Medical Superintendent Asylum for Insane, Hamilton, Ont.

William L. Russell, First Assistant Physician Willard State Hospital, Willard, N. Y.

Ernest V. Scribner, Medical Superintendent Worcester Insane Hospital, Worcester, Mass.

T. J. Searcy, Superintendent Alabama Bryce Insane Hospital, Tuscaloosa, Ala.

G. A. Smith, Superintendent Manhattan State Hospital, Central Islip, Long Island, N. Y.

Samuel E. Smith, Medical Superintendent Eastern Indiana Hospital for Insane, "Easthaven," Richmond, Ind.

George P. Sprague, Superintendent High Oaks Sanitarium Lexington, Ky.

W. P. Spratling, Medical Superintendent Craig Colony for Epileptics, Sonyea, N. Y.

Henry Putnam Stearns, Superintendent Retreat for the Insane, Hartford, Conn.

H. A. Tomlinson, Physician-in-Chief and Superintendent St. Peter State Hospital, St. Peter, Minn.

George T. Tuttle, First Assistant Physician McLean Hospital, Waverley, Mass.

Ira Van Gleson, Director Pathological Institute New York State Hospitals, New York, N. Y.

J. Percy Wade, Medical Superintendent Maryland Hospital for Insane, Catonsville, Md.

Charles G. Wagner, Superintendent State Hospital, Binghamton, N. Y.

Moses J. White, Medical Superintendent Milwaukee Semi-State Hospital for Insane, Wauwatosa, Wis.

Edward M. Wiley, Superintendent Eastern Kentucky Insane Asylum, Lexington, Ky.

Peter M. Wise, President State Commission in Lunacy, State of New York, 1 Madison Ave., New York, N. Y. (*President-Elect.*)

C. R. Woodson, Superintendent State Hospital No. 2, St. Joseph, Mo.

W. L. Worcester, Assistant Physician and Pathologist Danvers Insane Hospital, Hathorne, Mass.

B. M. Worsham, Superintendent State Insane Asylum, Austin, Tex.

Other visitors, and guests of the Association were as follows:

His Excellency J. Hoge Tyler, Governor of Virginia.

Mary A. Avery, M. D., Late Assistant Insane Department Philadelphia Hospital, Portland, Me.

A. P. Busey, M. D., Superintendent Colorado State Insane Asylum, Pueblo, Col.

C. W. P. Brock, M. D., Richmond, Va.

- Daniel M. Dill, M. D., Chairman Committee on County Hospitals for the Insane of Essex County, N. J., Essex County Hospital for the Insane, Newark, N. J.
- Rev. T. Y. Downman, Rector of All Saints Church, Richmond, Va.
- L. S. Foster, M. D., Superintendent Eastern State Hospital, Williamsburg, Va.
- W. H. Fry, Esq., Coyners Spring, Va.
- Dr. J. R. Gildersleeve, Member Board of Directors Southwestern State Hospital, Tazewell, Va.
- M. L. Graves, M. D., Medical Superintendent Southwestern Insane Asylum, San Antonio, Tex.
- Donald C. Haldeman, Trustee Pennsylvania State Insane Hospital, Harrisburg, Pa.
- Horace A. Hawkins, Staff The Richmond News, Richmond, Va.
- Samuel W. Hopkinson, Trustee Danvers Insane Hospital, Hathorne, Mass., Bradford, Mass.
- Benjamin L. Hume, M. D., Third Assistant Physician Central State Hospital, Petersburg, Va.
- George E. Malsbary, M. D., Official Stenographer American Medico-Psychological Association, Cincinnati, Ohio.
- W. C. Orr, M. D., Interne Central State Hospital, Petersburg, Va.
- Alfred C. Palmer, M. D., Richmond, Va.
- George B. Remick, Director Oak Grove Hospital, Flint, Mich., Detroit, Mich.
- George Goss, M. D., Richmond, Va.
- Samuel Small, Trustee Pennsylvania Insane Hospital, York, Pa.
- Hon. Richard M. Taylor, Richmond, Va.
- C. N. Thoman, Member Board of Managers State Hospital for Insane No. 2, St. Joseph, Mo.
- J. N. Upshur, M. D., Emeritus Professor of Practice of Medicine Medical College of Virginia, Richmond, Va.

On reassembling the address of the President, entitled "A Century of Hospital Building for the Insane," was read.

Dr. Henry M. Hurd: We have listened with great interest to this very excellent review given by Dr. Rogers, of the provision for the insane, and I rise to move that a vote of thanks be extended to Dr. Rogers and that a copy be requested for publication in the *Journal of Insanity*.

The motion, duly seconded, was placed before the Association by Ex-President Bucke, and prevailed unanimously.

SECOND SESSION.

The Association was called to order by the President at 3.10 p. m.

The following papers were read:

"Two Hundred Operative Cases—Insane Women," by R. M. Bucke, M. D., London, Ont. Discussed by Drs. W. P. Manton, C. R. Woodson, J. Russell, A. B. Richardson, W. Mabon, T. O. Powell, and by Dr. Bucke in closing.

"Is the Anglo-Saxon Degenerating?" by J. Russell, M. D., Hamilton, Ont.

"The State of New York—The Pathology of Insanity?" by P. M. Wise, M. D., New York. Discussed by Dr. E. C. Runge.

"Degeneracy from a Philosophical Point of View," by O. Everts, M. D., College Hill, Ohio.

THIRD SESSION.

The Association was called to order by the President at 8 p. m.

The following papers were read:

"The Study of Clinical Psychiatry," by Aug. Hoch, M. D., Waverley, Mass. Discussed by Drs. H. M. Hurd, E. C. Runge, and H. A. Tomlinson.

"The Colonization of Certain Classes of the Chronic Insane: with Suggestions and Illustrations from the Craig Colony for Epileptics," (illustrations by lantern slides), by W. P. Spratling, M. D., Sonyea, N. Y.

Dr. C. B. Burr: We have all listened with interest to Dr. Spratling's paper. It has been almost equivalent to a visit to the Craig Colony, and I am certain I voice the sentiment of the Association when I move a vote of thanks to the Doctor.

The motion was seconded and prevailed unanimously.

WEDNESDAY, MAY 23, 1900.

FIRST SESSION.

Called to order by the President at 10 a. m.

The Secretary read a letter from the Secretary of the American Committee of Arrangements for the Thirteenth International Congress requesting the payment of twenty-five (\$25.00) dollars to defray the expenses of the committee, of which the President of the Association, by virtue of his office, is a member.

The Secretary: The President asks that I make an announcement concerning the action of the Executive Committee of the Congress of American Physicians and Surgeons, in reference to embracing this Association in the Congress. We have no official notice whatever of such action.

Dr. Henry M. Hurd: It was unanimously decided that this Association be represented, although we have received no notice of it.

On motion of Dr. Chapin the matter was referred to Council.

Dr. Blackford: Mr. President, as Chairman of the Committee of Arrangements I regret to say to the Association that we are very much disappointed in not being able to take the members to Old Point, but it was thought time could not be spared from the sessions of the Association. To-morrow night we propose giving a reception at the hotel, with a cake walk and other accompaniments, which we trust will entertain the members.

The following report of the *American Journal of Insanity* was presented by Dr. Hurd:

BALTIMORE, May 16, 1900.

To the Members of the American Medico-Psychological Association.

Gentlemen: I present herewith a statement of the receipts and disbursements in behalf of the *Journal of Insanity* for the journal year from May, 1899, to May, 1900, by which it will be seen that the receipts from all sources have been \$2,626.27; the expenses have been \$2,221.28, leaving a balance on hand of \$405.04. In addition to this amount there is a sum of \$118.50 due for advertisements which is collectable, and a small sum due for unpaid back subscriptions which is probably doubtful.

The four numbers of the *Journal* during the past year have been issued with a fair degree of punctuality, and I think compare favorably with the publications of any previous year. It is evident that there is an increasing amount of scientific work which seeks publication through the columns of the *Journal*. Much of the scientific work published is of a high character, and all of it is most encouraging to those members of the Association who desire to see its work aspiring to a high plane of scientific attainment.

The vouchers covering all the expenses are submitted herewith. I would ask that they be referred to the auditors for report.

I would again urge as in previous years that the members of the Association bear in mind that the *Journal* belongs to the Association, and is the best organ for those members who desire to publish. I would also call attention to the fact that in order that it may reach its full development we need more money and consequently should have more advertisements. I would ask the members of the Association to use their best efforts to procure advertisements for the *Journal*, and in making purchases to bear in mind those firms who show their appreciation of our work by giving advertisements to the *Journal*.

Very respectfully submitted,

HENRY M. HURD,

In behalf of the Board of Editors.

On motion of Dr. Burr the report was referred to the auditors.

Dr. Wise: Mr. President, I desire before this subject passes to move a vote of thanks to Dr. Hurd and his associate editors for the excellent work they have accomplished on the *Journal*.

Seconded and carried.

The applicants for membership, formerly reported upon by the Council at yesterday's session, were elected unanimously by ballot.

The following report of the Nominating Committee was presented by Dr. P. L. Murphy:

The Nominating Committee beg to recommend the following gentlemen as officers of the Association for the ensuing year:

President, P. M. Wise, of New York.

Vice-President, R. J. Preston, of Virginia.

Secretary and Treasurer, C. B. Burr, of Michigan.

Councillors, S. E. Smith, of Indiana

William Mabon, of New York.

James Russell, of Ontario.

A. B. Richardson, of the District of Columbia.

Auditors, William M. Edwards, of Michigan.

W. B. Lyman, of Wisconsin.

Yours truly,

P. L. MURPHY,

Chairman of Committee.

On motion the report was adopted, and the Secretary cast the ballot of the Association for the election of the officers named.

The following papers were read:

"The Insane in General Hospitals," by J. M. Mosher, M. D. Discussed by Drs. W. L. Worcester, H. M. Hurd, P. M. Wise, A. B. Richardson, A. P. Busey, H. A. Tomlinson, C. R. Woodson, W. P. Spratling, Richard Dewey, and by Dr. Mosher, in closing.

"Some Statistics and a Partial History of the Insane in Virginia," by R. J. Preston, M. D., Marion, Va.

"Clinical Study of Thyroid Extract," by W. F. Drewry, M. D., and J. M. Henderson, M. D., Petersburg, Va. (Read by title.)

"Myxoedemal Insanity," by H. Ernest Schmid, M. D., White Plains, N. Y. (Read by title.)

"A Clinical Case," by A. R. Moulton, M. D., Philadelphia. Discussed by Drs. E. N. Brush, C. A. Drew, and Dr. Moulton, in closing.

"Status Epilepticus: Its Nature and Pathology," by Thomas P. Prout, M. D., Morris Plains, N. J., and L. P. Clark, M. D., Sonyea, N. Y. (Read by title.)

"Epilepsy in the Insane," by Isham G. Harris, M. D., Poughkeepsie, N. Y. Discussed by Dr. W. L. Worcester.

SECOND SESSION.

The Association convened at 8.45 p m.

The annual address, "The Effect of Freedom upon the Physical and Psychological Development of the Negro of the South," was delivered by Dr. J. Allison Hodges, of Richmond.

Upon motion of Dr. Powell, a vote of thanks was tendered to Dr. Hodges for the admirable, eloquent, learned and able address.

THURSDAY, MAY 24, 1900.

FIRST SESSION.

The Association was called to order at 10.20 a. m.

The following report of Council was presented by the Secretary:

Mr. President: The Council would respectfully report that the request of the Committee of Arrangements for the Thirteenth International Congress has been complied with so far as the action of the Council is concerned, and that the Council would recommend to the Association an appropriation of \$25.00 to assist in defraying the expenses of the committee.

Further, the Council reports that it would recommend to the Association that the Association become affiliated with the American Congress of Physicians, and would suggest that a committee of one, Dr. Brush, be appointed to negotiate in reference to the matter and perfect the arrangements.

As to the time and place of meeting, the Council suggests Milwaukee, Wisconsin, as the place for the next meeting, nominates Drs. Richard Dewey, W. A. Gordon, W. B. Lyman, M. J. White, and William F. Beutler, as committee of arrangements and would leave with the committee the naming of the date.

Upon motion of Dr. Hurd the recommendations of Council were taken up in their order.

"That the request of the Committee of Arrangements for the Thirteenth International Congress has been complied with so far as the action of the Council is concerned, and that the Council would recommend to the Association an appropriation of \$25.00 to assist in defraying the expenses of the committee."

Dr. Hurd moved that the appropriation be made. Seconded and carried.

"Further, the Council reports that it would recommend to the Association that this Association become affiliated with the American Congress of Physicians, and would suggest that a committee of one, Dr. Brush, be appointed to negotiate in reference to the matter and perfect the arrangements.

Dr. Adams moved that the recommendation of the Council be adopted. Seconded by Dr. Hurd and carried.

"The Council suggests Milwaukee, Wisconsin, as the place for the next meeting, nominates Drs. Richard Dewey, W. A. Gordon, W. B. Lyman, M. J. White, and William F. Beutler as a committee of arrangements, and would leave with the committee the naming of the date."

Upon motion of Dr. A. B. Richardson the recommendation of Council was approved.

The following papers were read:

"Separate Provision for Tuberculous Patients in State Hospitals for the Insane," by A. H. Harrington, M. D., Hathorne, Mass. Discussed by Drs. G. H. Hill, P. M. Wise, and H. A. Tomlinson.

"Primary Dementia," by George P. Sprague, M. D., Lexington, Ky.

"Dementia Præcox," by G. H. Hill, M. D., Independence, Iowa.

The papers of Drs. Sprague and Hill were discussed by Drs. C. A. Drew, E. C. Runge, A. H. Harrington, C. W. Page, and H. A. Tomlinson.

"An Analysis of One Hundred Cases of Acute Mania," by E. N. Brush, M. D., Towson, M. D. (Read by title.)

"The Study of a Year's Statistics," by Charles W. Pilgrim, M. D., Poughkeepsie, N. Y. Discussed by Drs. C. B. Burr, P. M. Wise, A. B. Richardson, W. L. Worcester, E. N. Brush, and B. D. Evans.

SECOND SESSION.

Called to order at 3 p. m.

The following papers were read:

"What Conditions, if any, would Warrant the State in taking

Life because of Incurable Mental Disease or Defect," by Richard Dewey, M. D., Wauwatosa, Wis. Discussed by Drs. E. C. Runge and T. O. Powell.

"Legal and Medical Insanity: Reflections on the recent Trial and Conviction of Bradford P. Knight, of Augusta, Me.," by C. P. Bancroft, M. D., Concord, N. H. Discussed by Drs. B. D. Evans, George F. Jelly, and W. H. Hancker.

"The Influence of Military Campaigns in Tropical Climates in the Production of Insanity," by A. B. Richardson, M. D. Discussed by Dr. B. D. Evans.

"Mental Responsibility," by Charles W. Hitchcock, M. D., Detroit, Mich. (Read by title.)

"Reciprocal Relations," by W. B. Lyman, M. D., Mendota, Wis. (Read by title.)

"Surgical Operations in Hospitals for the Insane," by Wm. Mabon, M. D., Ogdensburg, N. Y. Discussed by Drs. B. D. Evans and W. P. Manton.

"Food and Dietaries in Hospitals for the Insane," by W. H. Kidder, M. D., Ogdensburg, N. Y. Discussed by Drs. P. M. Wise and Wm. Mabon.

The following report from the auditors was read:

The statement of the editors of the *American Journal of Insanity*, showing an itemized list of expenditures, and vouchers for each, has been examined and found correct.

The accounts of the Secretary and Treasurer, including books showing receipts and vouchers for all expenditures, have been examined and found correct.

T. J. MITCHELL,
WM. MABON,

Auditors.

FRIDAY, MAY 25, 1900.

FIRST SESSION.

Called to order at 10 a. m.

Dr. C. B. Burr: Mr. President, Dr. Beemer, at the St. Louis meeting, spoke of the publication by the Association of a map and chart and descriptive matter in respect to the hospitals for the insane in the United States and Canada. The plan as outlined to me seemed to be a good one. The Doctor has begun

this work but it has not yet reached the degree of perfection he would like before publishing. I would move, therefore, that when this work is thoroughly done as Dr. Beemer desires, that the matter be referred to the Council with authority to publish if the Council in its judgment thinks it expedient.

Seconded and carried.

The following memorial notices were read by title and ordered printed in the Transactions:

Charles Inslee Pardee, M. D., by Dr. A. E. Macdonald.

J. D. Lomax, M. D.

A. H. Witmer, M. D., by Dr. A. B. Richardson.

C. C. Eastman, M. D., by Dr. C. G. Wagner.

The following papers were read by title:

"Guardian Societies for the Insane," by Jules Morel, M. D., Mons, Belgium.

"Some forms of Cerebral Seizures in Insanity," by I. H. Neff, M. D., Pontiac, Mich.

"Reflections on Traumatic Hysteria," by C. B. Burr, M. D., Flint, Mich.

Dr. Henry M. Hurd: It may be remembered that at the last meeting of the Association we had a committee appointed on the preparation of a history of the Association. It seems to me we ought to have a report of that committee. Do you know, Dr. Burr, who was on that committee?

The Secretary: Dr. Brush was chairman.

Dr. Hurd: I presume nothing has been done.

The Secretary: Nothing that I know of.

Dr. Rogers: Gentlemen of the Association, I have the honor to introduce your next President, Dr. Peter M. Wise, of New York.

Dr. Wise: Members of the Association, I cannot express in proper terms the appreciation which I feel of the great honor you have conferred upon me, and I sincerely hope that we may look forward to the next meeting of the Association as one of the valuable meetings, and looking toward that consummation I sincerely hope that the members of the Association will prepare for it as soon as they reach home, or commence preparation, and in this I feel that I speak on behalf of the Secretary. I want to say a word of warning on this subject. The Secretary told me yesterday that it was actually necessary to spur up the

members in order to make up a program. And this is necessary, not because you do not have in mind the work for the Association, but it is simply put off from day to day until you receive a notice. I hope the papers for the next meeting will be offered in sufficient number to avoid a request from the Secretary. Allow me to again thank you for the honor you have conferred upon me.

The following resolution was offered by Dr. H. M. Hurd:

Resolved, That the hearty thanks of the Association be extended to the Governor of the State, the Mayor of the city, and the medical profession generally, for their hearty welcome and boundless hospitality; to the members of the Committee of Arrangements and their ladies for the delightful entertainment prepared and for the provision for the comfort and well being of the members so abundantly made; to the Jefferson for the use of its excellent convention hall, and for its hospitality to the Association; to the Commonwealth, Westmoreland, and Albemarle clubs for the privileges of these clubs respectively; to the ladies of the Memorial Association for the invitation to visit the Confederate Museum; to the University of Virginia for the invitation extended to visit that historic and time-honored institution; to the Trustees of the various State hospitals for the insane in the State for their invitation to visit the different institutions of the State, and for the generous hospitality accorded to the members and their wives; to the press for the excellent reports of the meeting; to the officers of the Association for their untiring efforts on behalf of the Association, and to all for the assistance in making the Fifty-sixth Annual Meeting the most successful in the history of the Association.

The resolution was unanimously adopted.

Dr. Rogers: The Fifty-sixth Annual Meeting of the American Medico-Psychological Association is about to close. That it has been both pleasant and profitable there is certainly no question. I desire to take this, my first opportunity, to express my earnest appreciation of the evidence of your confidence and esteem in choosing me as your President for this meeting. Your kind and lenient co-operation has made my duty both easy and agreeable. With the wish that the success and prosperity of the Association may continue for a thousand years, I declare this meeting adjourned to meet at Milwaukee next year on a date to be fixed as provided.

C. B. BURR,

Secretary.

PRESIDENTIAL ADDRESS.

A CENTURY OF HOSPITAL BUILDING FOR THE INSANE.

By Joseph G. Rogers, M. D.,

*Medical Superintendent Northern Indiana Hospital for the Insane, Longcliff,
Logansport, Ind.*

One of the duties of the President of your ancient and honorable body is the presentation of a formal address. Under the law of precedent and custom, this may be historical, biographical, pathological, therapeutical, ethical or what not. It may and should be replete with good rhetoric, and its tone may be mildly suggestive, but it must not contain any criticism or dogmatic, right-from-the-shoulder, good advice; this is the special prerogative of the man-up-a-tree, who sees us "as ithers see us," and is therefore competent to correct our errors and lead us in the way we should go.

Now, in seeking a topic for the present discourse, in fulfillment of this duty, within the limitations referred to, I have found the field to be trodden hard all over, so well has it been traversed by my honored predecessors, and there appears to me to be nothing absolutely and directly medico-psychological which promises a good return from present cultivation on my part; therefore, I have been impelled to go beyond established boundaries, and, as a result, beg leave to submit some memoranda on domiciliary psychiatry, so to speak; in other words, on Hospitals and Homes for the Insane.

It has been said by some who are interested in other matters just now that this subject was exhausted by the founders of this society and is no longer worthy of its dignified attention. But that was forty years ago; and what has been done since may, after all, be of some interest to some. Indeed, having been much engaged in the designing and construction of such homes, I confess that I am influenced by the old maxim, "*ne sutor ultra crepidam*," and deem it wise to stick to my last. That the insane require special domiciliation and environment, goes without saying; that conditions in these respects have much to do with their welfare, is a lesson of experience; and that the perfection of these conditions is second to no other desideratum in their care, is a dictum in which the practical psychiatrist will join me, I am sure.

Early diagnosis of mental disease and of correlative maladies, prompt separation from accustomed surroundings, judicious treatment—mental, moral and physical—the careful observation of clinical and pathological facts, at the bedside and in the laboratory, and proper record of same, and even the infatuating search for the ever-evasive missing link between mind and matter—all these are vastly important, but none is more so than that the insane patient shall be in a domicile well suited in every way to his peculiar conditions and needs.

Unfortunately, to absolutely fulfill this requirement is often impracticable. So many and so incongruous are the conditions to be met, that even theoretical methods and means must conflict, and the practical sum total must involve more or less compromise.

This is true more particularly of public provision for the insane. The rich may find perfect fitness in individual homes or in small establishments for special classes, but it is not my purpose to discuss the wants of these in this relation: ability to pay usually causes supply and demand to meet half way; they can help themselves. When the State pays, however, cost often limits the embodiment of the ideal; custom and routine too often antagonize the best laid schemes, and popular prejudice, based on ignorance and neglect, can be cleared away from the path of improvement only by a slow and laborious enlightenment. Fortunately, the heart of the people is not hard, and when a need

is felt and fully understood, promising methods are usually approved and means are provided with a free hand.

All Christendom has not advanced alike in this relation, but the tendency is everywhere patent, and it is sure that effort everywhere will be more or less repaid. In the universal iconoclasm in thought and action which marked the revolutionary ending of the eighteenth century, modern progress in the care of the insane may be said to have had its beginning. All before has a history of crude, cruel, careless, custodial neglect. With the radical reforms of Pinel in France, and Tuke in England, in general treatment, arose gradually a demand for better homes, affording an increased measure of comfort and privilege. The mad-house slowly gave way to the asylum, the gloomy cell to the pleasant chamber, and the dark-walled, stone-paved court to the sunny airing-ground. Later, with the effort and hope to cure rather than simply keep, came the hospital, with the resident medical staff, neat, clean wards, special arrangements of space and ground plan, and pleasant groves, lawns, gardens and farm lands, affording agreeable relaxation and occupation to many inmates. Institutions of this class slowly multiplied in the more enlightened parts of the world, established and maintained by the State or by organized charity. So marked was their superiority over the older establishments that they became more and more numerous, and, under the pressure of requirement, greater and greater in size, until this became excessive. The quadrangular and linear plans in vogue were found to be inadequate and gave place finally in new construction to the arrangement known as the Kirkbride System, which permitted the aggregation of a number of buildings, partially detached but still under one roof. While retaining the corridor, a relic of the monastery, and used in all older methods of construction, it provided an arrangement of sections, *en echelon*, in which, while more or less connected at the ends, the alignment was such that light and air could enter into the corridors by large end windows, which were usually supplemented by alcoves and bays about the middle of the sections, which were mainly composed of small rooms on each side of the corridor.

The classical work of Dr. Kirkbride on hospital construction was a guide for builders everywhere for many years, and Europe as well as America is now dotted all over with structures em-

bodying his suggestions, many of them, however, far transcending in their costly, embellished, monumental architecture, their simple, modest, convenient prototype in the City of Brotherly Love. This is particularly notable in the State institutions of America, less so in the county and borough asylums of Great Britain, while the smaller establishments of benevolent corporations everywhere, as well as the county and municipal institutions of America have, as a rule, remained quadrangular, irregular or nondescript, with little or no pretention to architectural elegance—often very comfortable, but using the plainest means to meet ends.

With increasing density of population and progressive expansion of State care, the tendency to overcrowding, enlarging, and then overcrowding again, resulted, some thirty years ago, in the evolution of a system of construction embodying the principle of segregation in smaller, detached buildings, grouped about a common center, the latter accommodating the various departments of administration. Various modified, it has been variously called the "cottage plan," the "house plan," the "block plan," and the "pavilion plan,"—the first name most popular, the last, perhaps, most appropriate.

The Cottage System, in which a limited number of patients, from twelve to twenty, are accommodated as a family in a building of cottage architecture, completely isolated but not too remote—an aggregation of such composing the institution—has been advocated by practical alienists in England and by others in America, but as far as I am advised, no modern establishment has been entirely organized on this plan. Here and there, throughout the world, this cottage system has grown into limited existence as an excrescence on the body of an established institution, from force of circumstances; as at Cheadle in England; and attempts have been made in recent constructions to provide partially for family groups in relatively independent domiciles, as at Richmond, in Indiana.

State policy, however, overrides the plans of scientific philanthropy and the actual trend is towards larger congregation and less cost. For more than a thousand years, the Belgian Commune of Gheel has stood as a prototype of this system, but has stood alone, if we may except the communities at Kennoway and

other places in Scotland, and the so-called "boarding out" method advocated and practiced to a limited extent elsewhere.

The essential feature of the *House Plan* is the more or less complete separation of the day and night apartments, the latter being usually on the second floor. In such, the corridor is narrow and only exists as a means of communication and transit, if at all.

The *Pavilion*, or *Block Plan* is a further development of the house plan, and consists of a grouping of detached buildings resembling ordinary houses, sometimes connected, however, by covered ways of one story. The day-rooms and dormitories are of varying sizes, the latter having capacity often for a number of beds, fifty or even more. Single rooms and small dormitories are also provided, but, in recent construction in this country and in Europe, not in sufficient relative number, as has been proven by experience very generally. This system was first used in France, soon after in Germany and in this country, and later, to a certain extent, in Great Britain and elsewhere. With a few exceptions, in all new State hospitals for the insane erected within the last twenty-five years, this method has been applied, and the same may be said of most notable additions to existing institutions of older fashion. The pioneer in America in the adoption of the pavilion system was the State of New York, in the hospital at Willard, under the direction and according to the plans of Dr. Jno. B. Chapin. A few years later, Illinois at Kankakee, Pennsylvania at Norristown, Ohio at Toledo, and Indiana at Richmond and Logansport, erected hospitals composed altogether of detached buildings, none containing more than two or three wards, and many of them only one. Later, New York, at Ogdensburg, has built an excellent embodiment of this new ideal, somewhat modified to suit the climate of its location. Still later, within a few years, Massachusetts, at Medfield, has practically duplicated the institution at Richmond, Indiana. In short, the tendency to the general adoption of the pavilion system is substantially confirmed.

Its superiority to older methods is shown mainly in its facility of indefinite expansion, its diminution of danger from fire, its possibilities for segregation of groups of inmates, its openness to fresh air and sunshine, and the possible likeness of its parts to the home. The latter advantage, however, is largely ideal; you

may break, you may scatter the parts as you will, but the stamp of the institution will still hang around it.

As to relative disadvantages, experience has failed to demonstrate any of a serious or positive sort. It is true that each system has its special merits and in each the advantages gained are purchased at the cost of other special advantages which are sacrificed for their sake. Every building is a compromise in which the ideal is forced to give way to the practical and the actual. Houses, like men, have their necessary limitations. It has been claimed that the cost of detached buildings is greater than where the same interior space is concentrated in one. This proposition is without actual foundation; the system of construction bears no relation to *per capita* cost. The simple mechanical rules, that estimates should be based on the amount of material and labor, and that a square quadrangle has the most economic content, apply to hospitals as well as to other structures. Experience teaches that every needed accommodation may be secured at less cost *per capita* than has usually heretofore obtained under any system, by a careful avoidance of the unnecessary in detail and ornamentation, without losing the beauty which symmetry and adaptation to use will always give to any structure.

As to the general plan, it may be reasonably said that that one is best which best combines the merits of all systems to the end that there may be secured the best adaptation of means and methods for the best care of each special class, giving such as require it close and incessant supervision and control, in quarters adapted to them,—to others the skillful and soothing care of the physician and nurse, in cheery, infirmary rooms—to others the largest liberty to exercise their bents, usefully if possible, with no bars but those of moral force,—to others the quickening spur of cheerful and amusing excitement,—and to all, something as near like a home as circumstances may allow.

The architecture should be plain, but not meanly so. The State, or rather, the public, which pays, does not expect it and will severely criticise, if it be so.

Without regard to systems of construction, the consensus of skilled opinion at present indicates, as essential in ever public institution for the insane, for each sex, departments severally for the noisy and violent, the quiet non-workers, the suicidal and

epileptic, the workers, and the sick and infirm. Opportunity for subclassification should be afforded by duplication of houses, wards, or whatever they may be.

No institution should be opened with less than sixteen divisions of its population—twenty if possible. The distressing conditions arising from defective opportunity for classification are often beyond description.

Many authorities advocate receiving departments into which all new patients shall go for temporary observation. The detention hospital of the large city is without question a useful and important element in the municipal equipment, but in an institution to which cases come only after a certain amount of investigation, in my judgment, an examination room affords all that is required in this direction, from which the patient can be sent directly to the division to which he apparently belongs.

The assembly hall, for amusement, is as necessary as the dispensary and affords pleasanter if not better medicine. There is no reason why this should not be detached; and it should be on the ground floor, for the convenience of the aged and infirm. The general kitchen, the laundry, the workshops, the store and the power house, containing boilers, light, heat and water apparatus, are best in detached buildings, each devoted to its special purpose, but may be connected by covered ways.

Ample provision should be made for the accommodation of employees, especially the nurses and attendants. It will help to soften the hardness of their work, to be comfortable in their off hours. As to quarters for the officers, nothing need be said; they have always been fairly well cared for in that particular and are usually able to get what they want. The administrative offices are usually grouped together in the same building, centrally located. This arrangement greatly facilitates general direction, on the part of the superintendent, of every department, and is most important.

As has already been said, facilities for classification and subclassification, in separated groups, are most important; and should be limited mainly by the extent to which multiplication of attendants can be afforded. In establishments where the patient pays for his care, segregation may be measured only by the length of the purse; but where the State pays there must be a definite limit. In public hospitals, by common consent, sub-

division does not go below groups requiring the service of at least two attendants. The ratio of attendants to patients in such institutions averages in practice, one in twelve. This indicates that the average capacity of wards should be at least twenty-four, and this in fact has been a practical standard. In recent years, however, especially where the house plan has been adopted and where all patients are under the eye of an attendant at night as well as day, certain classes are grouped in large number, and houses containing one hundred or more are not uncommon.

Recurring to the primary classification before given, it is now conceded, all things being considered, very generally, by medical officers in American and foreign hospitals, that the various classes may be best grouped as follows:

1. *For the Noisy and Violent, Disturbed and Disturbing:* Quarters for ten or twelve patients, with two day attendants, and one for the night, with single bed-rooms, a dining-room and scullery, day-room, bath-room, wardrobe, water-closet, etc., so arranged that attendants may be within convenient access to any patient at any time. A roomy loggia, wire-screened and glazed in winter, is an excellent accessory to wards for this class, affording a pleasant retreat in quiet moods from the restlessness of the sitting-room or the seclusion of the single room. An empty seclusion room is also desirable for occasional use in cases of extreme violence. This should have a pleasant but solitary outlook, for obvious reasons. Residence, in this class, is usually temporary, but wards devoted to it should have room for twenty per cent. of the entire hospital capacity. They are best arranged on the horizontal house plan—that is to say, as a flat on a single floor.

2. *For the Quiet Non-Workers:* Quarters for twenty to forty patients, with two or three day attendants, and one for the night, well lighted, heated and ventilated, including a dining-room and scullery, a bath-room and wardrobe, a large day-room and one large dormitory, with a small number of single bed-rooms to be used for often-needed isolation. This class includes demented, paralytics, feeble, non-suicidal melancholiacs, and very old persons. They require much personal attention and are little able to help themselves. For this reason, wards for this class should

be on one floor. They should have capacity for ten per cent. of the total population.

3. *For the Suicidal and Epileptic:* Quarters for twenty to forty patients, with two day attendants, and one for night, similar to those above described. The suicidal are rarely noisy, epileptics are violent only at times and then often very much so. Both classes require constant watching, both day and night. To insure this, they must be congregated at all times. The advantages of the house plan with compact and all including day-rooms and dormitories have been especially demonstrated in their application to the care of these classes. In this connection, I desire to note that the segregation of the epileptic insane in wards by themselves cannot properly be made to include all such cases. There are many which will be better assigned to other groups. Wards for this class should be on the ground floor, if possible, and should have capacity for fifteen per cent. of the total.

4. *For the Quiet Working Class:* Pavilions of large size on the vertical house plan—that is, with day apartments below and those for the night on the second floor—have been found to be particularly adapted, even with a capacity for one hundred or more. This class usually comprises half the population, is mainly composed of chronic cases, only liable to disturbance or violence at times. Such require only the control which long accustomed regularity of life and discipline exercises; they need watching, however, to some extent, as do all the insane. The majority of them do best when grouped in large families and kept occupied in some useful work, either indoors or elsewhere outside, on the farm, in the garden, the workshops, or in some of the domestic departments. All such may go beneficially to a large common dining-room, and to a central bath house. Pavilions for this class may properly each contain a large quadrangular day-room, a few small rooms for isolation, and the usual necessary accessory rooms, which should be of ample size, and some of which may be better semi-detached, all below; and a few single rooms and a large dormitory above. Such, containing as many as eighty beds, in Europe, and many but little smaller in our own country, have been in very successful use for many years.

The relative cost of such structures is small. They may be provided to the extent of fifty per cent. of the total. The ratio of attendants may be properly 1 to 20.

5. *For the Sick and Infirm:* Usually constituting about twelve per cent. of the population, special provision should be made, and has been in most recent construction.

The science of the day is no longer satisfied with mere comfortable housing, but demands that those suffering from physical disease shall be, at least for the time, in the midst of sanitary environment, which shall offer no pregnable foothold to the prime causes of disease and in which the battle against them may have the best opportunity for success. It is true that all institution construction should embody the best sanitary principles, to the end that fresh air, sunlight and cleanness may be easily available, as safeguards to make every house a fortress against disease, but the infirmary should be a specially prepared arena with every advantage taken so that the conflict already on may be won, if possible, and the invading enemy destroyed on the spot.

An approved plan provides opportunity for subdivision and isolation of groups and individuals, with rooms varying in capacity from one to six, so arranged that infectious cases of a sort may be placed together either in single rooms or small wards, cut off from the central day and dining-rooms and from other apartments. Among these is a small ward of six beds for advanced tubercular cases not able to live out of doors. This has an open fire-place, special bath, lavatory, etc., adjoining, all floored with impervious vitrified tile, plastered with adamant, and ceiled with steel under concrete, both wall and ceiling being coated with enamel paint. A similar ward is for sick employees. Each is provided with an elevated veranda or covered balcony of ample size having no outside entrance. From the central day-room extend symmetrically two short open corridors, each leading to groups of rooms with capacity for from one to four persons. There are also located the nurses' rooms, a surgery, a diet kitchen, the bath-room and the wardrobe. The dining and day rooms are separated only by a massive chimney and metallic grilles, so that light and air have ready access from all sides. Two other corridors lead from the center, forming a Y to two groups of six single rooms each, intended for special isolation. In the Y mentioned, is a commodious, sunny loggia, communicating with the day-room and adjacent closets, but without outside entrance. This is enclosed by a wire screen and

is glazed in winter. There are nine entrances, two of them opening into partially closed courts on either side of the day-room, which are intended for the use of convalescents and the infirm in pleasant weather. The vestibules, loggia, surgery, bath-room, kitchen, closets and some of the isolation rooms, as well as the small wards before mentioned, are floored with tile, in most instances of the vitreous sort. Elsewhere, narrow, hard maple is used, well varnished. All walls are of brick, plastered with adamant, all stairs of slate, and all ceilings of steel. Interior wood-work is of ash, perfectly plain. All inside surfaces are finished with enamel paint or varnish. The windows have a large area, high but narrow, some being protected by light wire screens, bent horizontally so as to form a shallow bay, permitting easy window cleaning without removal of the screen—others without any. External doors are made with heavy mullions and are glazed. Inside doors are of ash, with flush inside panels where any are required. Many are without panels so as to facilitate observation and reduce the sense of seclusion when closed. All doors are hung on plated, loose-joint, wrought steel butts, and equipped with cylinder locks. Lighting is by incandescent electric lamps. All rooms have lamps which are controlled by flush lock switches, set in the door casing outside, so made that they cannot be detached or operated except by a special socket key. Heating is by indirect radiation, from individual pin radiators, in a clean basement, paved with cement. These are furnished with fresh air through large ducts of vitrified clay pipe, terminating outside at some distance in pedestals of brickwork, surmounted by iron inlets, six feet high, which in summer are used for flower vases. The inflow is controlled by dampers operated from above, inside the building. The roof is equipped with numerous large ventilators, provided also with dampers and capped with hammered glass, to admit light. All flues are smoothly lined with fire-clay rectangular tubes of ample size, and are provided with lock registers for warm air and ventilation, set in the masonry, respectively five and two feet above the floor.

All pipe work is of iron, is exposed, and passes water-tight through special floor thimbles. The lavatories, bath, sinks, etc., are of heavy porcelain, as a rule. All are trapped and all traps are ventilated above the highest roof. The tile floors of

scullery closets and bath-rooms are equipped with trapped drains and may be flooded and flushed at will. All waste pipes are trapped and vented externally, and those from sinks end in a large iron grease trap, to prevent clogging of drains with lime soap. Besides the usual fixed immersion tub, there are provided a portable bath and a needle and shower apparatus. The clothing and dust chutes are large tight cylinders of tank iron, safely vented through the roof and ending below, so that sterilization may be readily practiced.

In addition to the quarters for nurses before mentioned, there is provision for a resident junior physician in the same building.

6. *For the Neat, Quiet, Mutually Agreeable Class*, made up of mental convalescents, permanently peculiar people, and others, who seemingly might be at home but yet cannot, there should be a special place in every institution. It may be a whole house detached, a flat or a ward, the first the better. It should consist mainly of small rooms holding one or three persons, with day-room, parlor, and the usual accessories, and demands a pleasant environment.

Patients of the third, fourth and sixth groups named may very advantageously use a common dining-room, having separate entrances for each sex. Practical experience has shown the benefit of this habitual meeting at meals in maintaining a higher standard of deportment, self-control and personal appearance, just as does the meeting for the dance or other general entertainment. The association in both cases is not intimate; one of sight only—and is surely to be commended. Proximity is not even desirable; a considerable walk under the sky, even a stormy one, is an acceptable episode in the dull monotony of the day, especially when the objective is a square meal, for which it certainly lends a zest. Fifty per cent. of inmates may thus go, and in some institutions as many as seventy per cent. are now doing so.

The superior economy of the common dining hall is now beyond question. The same may be said of the common kitchen, even in institutions made up of detached and scattered houses, and, as far as I am advised, attempts to maintain an individual kitchen for each, with a view to helping out the semblance to the home, have been abandoned as failures in State establishments.

Houses or wards for patients of the first, second and fifth general classes should include separate dining-rooms, with proper

accessories. A small gas kitchen, with from one to three burners, will be found to be a prime convenience in all wards, and is recommended, if practicable.

So far, we have mainly considered arrangement of house space to suit various classes of patients, with but little reference to details of construction; these, however, are worthy of some notice, insofar as it may point out some improvement in means to the end in view, namely, the better care of the insane. For brevity's sake, they will be stated aphoristically:

1. Every building or part thereof intended to accommodate patients should have a basement, high, dry, well lighted, ventilated, drained if possible, and paved with cement, pipe trenches and other irregularities being avoided. It should not be used for miscellaneous storage.

2. Foundations should be of stone, or better, vitrified brick, laid in cement.

3. Outer walls should be of stone or brick, hollow if in a moist climate.

4. All main inner walls should be of brick, and thick enough to accommodate flue lining four and a half inches thick without offsets or pilasters. Such linings may be procured of any necessary width so as to secure ample area of cross section.

6. Partition walls should be of brick, and, if short, may be only nine inches thick; if of hollow brick and iron, the thickness may be only four inches.

7. Interior wall surfaces should be of face brick or hard plaster—adamant, Keene's cement, or other such material. Something can be saved by using common plaster on the upper half. When thoroughly dry and hardened, all inner walls should be well painted, finishing with a gloss coat, plaster walls being first thoroughly sized and brick walls covered with a coat of thin size thickened with Portland cement.

8. A good institution floor is of narrow, hard maple, closely laid, on a cross layer of pine, three inches thick, with intervening layers of deafening felt, supported on beams of proper size and space, resting with obliquely cut ends in the masonry. This is what is called slow-burning construction. It has been largely used in the factories of New England and has greatly lessened the actual cost of mutual insurance in that region. Being solid, four inches thick, without air spaces, rapid burning is impossi-

ble. The under surface, dressed directly, or faced with a thin layer of hard wood properly finished, affords a handsome ceiling which cannot be damaged by water.

The cost of floors made of iron and brick will preclude their use in most structures for the purpose in question.

Where cost bars both of the above systems, ordinary joists carrying two or three inches of a weak concrete, made of lime, sand and cinders, on a false floor, overlaid with maple, and ceiled with steel, will give a very satisfactory result.

9. All interior wood work should be quite plain, with flat surfaces and without sharp angles, as far as possible. Close doors are best when veneered on both sides, without panels, but such are expensive. If with panels, they should be flush on the inner side, if for small rooms.

10. The open panel door which has been largely used in the hospitals of my own State for many years, has many advantages, and no faults have been noted in practice. It differs from an ordinary door only in the substitution of vertical spaces, five inches wide, for the panels above the lock rail. By it, decided improvement in light, ventilation and heat is secured, observation is facilitated, and the sense of seclusion is minimized. It is particularly suited for small rooms, but may be used for any. If at any time needed, false panels may be temporarily or permanently screwed on.

11. Window sash of wood answer every purpose; such are rarely broken. A desirable size for the glass is $5\frac{1}{2} \times 10\frac{1}{2}$ inches, and inside glazing is very convenient for repairs, which are necessarily frequent. In all cases, bedding is essential. Window sills having a slope of forty-five degrees are advantageous, in offering no foothold for climbing. Windows without guards may have stop blocks to limit openings to five and a half inches, where such are needed. If larger, passage is often practicable.

12. Cylinder locks should be used throughout—dead locks inside and latches for entrances—for the reason that they excel in durability, security and convenient smallness of keys. They are now made by several firms, the original patents having expired.

13. In rooms ten feet high, the floor space allotted to each patient should be at least, in single rooms, 75 square feet; in

dormitories, 50 square feet; in day rooms, 50 square feet; in dining-rooms, 10 square feet.

14. In summer, ventilation by windows is required in all climates in America more than in Europe. On this account, the blocked window is often too close, and for this reason solely, a window guard of some kind is often necessary, in order that the sash may be widely opened. In winter, natural ventilation being abandoned, inlet and outlet conduits are necessary. An average man inspires only 12 cubic feet of air per hour, but by transpiration through lungs and skin, he vitiates 135 cubic feet, a total of 147 cubic feet. It may then be assumed that a supply of 150 cubic feet per hour will meet actual sanitary requirements—but in practice it is well to use 15 as a factor of safety and make it 2250 cubic feet. With a difference of 25 degrees between internal and external air, a flue twenty feet high with 2 square inches area of cross section will deliver more than 150 cubic feet of air per hour. With an area of 24 square inches, as given by a standard 4 in. x 3 in. flue lining, the delivery will approximate 5000 cubic feet per hour. For single closed rooms, this size should be the minimum. Under the conditions named, the air of a room 8 ft. x 10 ft. x 10 ft. will be changed six times per hour, which will meet all requirements consistent with reasonable economy. It may be said, however, in this connection, that no system of flue ventilation will very successfully carry off a foul odor which is constantly emanating from a source in a room. For this, rude boreas and a cleaner must be called in.

In the best construction, the air is heated by hooded radiators in basements before entrance into the flues, steam or hot water being used—in this country usually the former—(indirect radiation). For certain places, for instance, dining-rooms, the assembly hall, etc., direct radiation from pipes or coils in the place to be heated, may be used, this being much the more economical. The former has the advantage of ventilating at the same time that it warms, and therefore is preferred for dormitories and day-rooms.

The average ratio of indirect radiation surface to space to be heated is 1:65; of direct, 1:150; but the amount of window surface and nature of exposure will require compensating consideration.

Open fire places afford excellent means of ventilation and add much to the cheerfulness of an interior. They may be used in day-rooms generally if guarded, and in some places without guards.

15. In the matter of equipment, I offer a few dogmatic opinions, based on personal experience.

In general use, wooden furniture, substantially and specially made with tight joints, is better than if made of iron.

Casters are undesirable. Bedsteads, especially, should be made so that all surfaces can be dusted and washed. An approved size is 3 ft. x 6 ft. 2 in., inside measure, for both employees and patients. A mattress of best long drawing curled hair (15 lbs.) on a good wire mattress, with a pillow of soft South American hair (4 lbs.) constitutes the basis of an ideal hospital bed. First cost is large, but it is everlasting and can be thoroughly cleaned and purified by being placed bodily in a rotary washer or sterilizer. No other mattress is sufficiently permeable for this process and it is in no way injured thereby, but, on the other hand, is improved in the matter of elasticity.

For infectious, infirmary cases, in rooms with impervious tile floor, the enameled iron bedsteads and other furniture may be preferred on account of special imperviousness and facility of disinfection.

For bed sore cases, the rubber air mattress is a prime desideratum. They are now made of excellent quality and durable. Water beds are not commendable.

For day-room seats, individual chairs are preferable to settees and benches, for all classes, but a liberal allowance of smoothly upholstered lounges is desirable. For this purpose, pantasote, an imitation of leather, is perhaps the best covering material, being smooth and impervious to moisture.

In the foregoing, I have considered the needs of the insane at large in the relation of domicile, in the light of most recent practice. There are certain special classes, however, for which special provision is now and may be made with great advantage, to which brief notice may be properly given. In large institutions, already overcrowded, in which further architectural enlargement on original plans is undesirable, expansion by colonies in the near neighborhood has been proven in recent years to be a most excellent method of relieving engorgement and

extending capacity. Usually, an ordinary improved farm has been bought or leased; the farm house has been suitably modified and enlarged; a number of quiet workers have been selected to occupy it from the inmates of the parent institution, and, in charge of a competent farmer and wife, with employed assistance, as far as necessary, the colony is established as a rural community, having little of the institutional aspect. Marked success has attended the experiments, particularly at Kalamazoo, Mich., and Utica, N. Y., and the reports relating thereto, full of interesting details, prove not only the excellence of this system of provision, but its relative economy, for the class to which it is applicable.

Another class which should, without question, be specially managed in the matter of residence, is the tubercular. These, which we know to be peculiarly numerous among the insane, are a constant source of fatal infection, and in these days when the whole medical world has been aroused to efforts of public and private prevention in every way possible, it certainly behooves us who have charge of all the insane of the land to join in this general war against a fell disease. Nowhere are the opportunities so complete and available for scientific control of its dissemination as in the institutions for the insane. In them, the difficulties and obstacles which bar the way of the public health officer and the legislator do not obtain; segregation may be enforced without objection, and every safeguard, not involving co-operation on the part of the patient, may be applied. Our duty is plain; there is nothing in the way of action and we should act promptly. Success which can be measured is sure to follow and an object lesson will be furnished which will stand before the eyes of the people in every part of the land and aid much to build up a public faith in the knowledge and judgment of the medical profession which will be a help indeed to those who are now struggling to secure a vantage ground on which to successfully fight tuberculosis.

For cases far advanced and only waiting for the end to come, isolated houses or wards are or should be provided, having full measure of light, fresh air and comfort, and an equipment for a daily life apart from others, all as proof against infective absorption as possible, and what is not, easy of disinfection. In

such, last days may be spent advantageously to the patient, and with limited danger to others, especially the nurses.

For those in whom the disease is incipient or has not progressed so far as to disable from locomotion, the ideal home is a well-equipped camp, agreeably located, with plenty of sunshine and some shade, pure water, a picturesque environment, facilities for occupation and exercise, and no house other than a tent, to be closed only when necessary for protection against inclement weather. According to most authorities, under such conditions, the expectorated bacillus tends to prompt death; fresh air and sunshine are its mortal enemies. That they are the helping friend of the sick man, improving his nutrition and powers of resistance, we will all agree. In short, whatever else is done, more life in the open air promises much good in itself, not only for the patient but as a means of reducing the volume, potency and dissemination of the morbid cause.

Approximations to this ideal have been in successful operation for years at various health resorts. Life in tents can be made agreeable in all seasons of the year, anywhere in the temperate zone. Even in the coldest weather, plenty of clothing and a stove will secure comfort. For several years past, I am advised, tent wards have been in use for eight months of each year at the State Hospital for Insane near Providence, Rhode Island, with satisfactory results. The tent sanitarium, in some form, may properly be a part of every public hospital for the insane, and be in operation at least during the warm months, if not all the year round. For the tubercular, its advantages are patent, but its uses need not be confined to this class. In tent quarters, apart from the infected, selected detachments from the entire population of an institution may advantageously and very agreeably enjoy temporary vacations, following each other *seriatim*, until as many as are fit have been served with a modicum of open-air life.

Having now presented a brief review of the major changes which have been developed in the provision of homes for the insane during the century behind us, I conclude with the hope that you may not deem it too much a twice-told tale and that it may prove of some use, somehow, to somebody.

ANNUAL ADDRESS.

THE EFFECT OF FREEDOM UPON THE PHYSICAL AND PSYCHOLOGICAL DEVELOPMENT OF THE NEGRO.

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The development of any people is an interesting study. Many varying circumstances modify the process of that development, and to properly estimate the advancement or decadence of a people it is necessary to know the epochal periods of their history, the elements of their heredity, the environments of their life, and, in short, all the factors affecting their mental, moral, and physical constitution.

In our midst, and in daily association with us of the South, there lives a people the study of whose racial history and development claims the interest, if not the enthusiasm, of every scientific student of medicine and sociology.

NEGRO POPULATION.

Two hundred and fifty years ago, an untutored savage, and a native of the west coast of Africa, with fifty generations of unalloyed savagery behind him, then a slave in America from 1620 to 1865, and now for thirty-five years, a freedman, with all the high responsibilities and duties of a citizen of this continent. Such, in brief, is the history of that people, a nation literally born in a day, of which I would speak to you this evening—a

people whose every step in the progress of development has been followed by the eager eyes of a wondering world.

At the time of the first census, in 1790, there were only 697,890 negro slaves in the United States, but the next census will probably show that there are nearly eight million negroes in the Southern States, and nearly ten million in the United States, a population lacking but two million of being as large as the whole population of Mexico, and nearly twice as large as that of Canada.

Naturally, in the investigation of the racial history and tendencies of this people there must be much of interest to enchain the attention of the student of sociology and political history, but, relegating to others the task of discussing the many vexed questions embraced in the so-called negro problem, the alienist and student of scientific medicine may well inquire with me: What has been the effect of freedom upon the physical and psychological development of the negroes of the South? Has it been damaging, or otherwise? Has the negro, since emancipation, the critical and epochal period of his history, improved his physical health and mental and moral condition, or has he retrograded both physically and mentally?

NEGRO OF THE PAST.

To answer this question intelligently and authoritatively it is necessary to know accurately the health of the negro prior to emancipation, and also something of his mode of life, as well as something of his natural and inherited tendencies.

Unfortunately for us, as some writer has said, "The South has made much history, but has written little," and, consequently, exact data as to these points are obtainable only from widely scattered authorities, but the consensus of professional opinion seems, unquestionably, to be that the negro during slavery enjoyed a remarkable immunity from disease. Indeed, it is doubtful, says Dr. Miller, if any race of men "ever lived under better hygienic restraints, or had governing their lives rules and regulations more conducive to physical health and mental repose. Their habits of life were regular, their food and clothing were substantial and sufficient, as a rule, and the edict of their masters restrained them from promiscuous excesses and the baneful influences of unrestricted indulgence."

Under these environments the negro "had no thought for the morrow," nor did the claims of family and household press upon him to worry and affect his mind; neither did avaricious dreams nor ambitious hopes as to the possibilities of the future stir his brain, but, "secluded from the maddening crowd's ignoble strife," he spent his quiet and peaceful days, an humble life in an humble home, with a master to care for every want of self and family in health and in sickness.

The negroes, unadulterated with alien blood, had no heredity of disease, and to some extent were considered immune to the climatic diseases of the South, and thus under the restraining and inhibitory influences of the institution of slavery they developed into magnificent specimens of physical manhood.

TRAITS OF CHARACTER.

Independence of thought and action with them was more theoretical than practical. They were accustomed to obey the dictates of their owners, whatever those dictates may have been; privation and want—those frequent causes of degeneracy—were unknown to them; their environment, it is true, was narrow, but a marvelous attachment to the families of their masters prevailed because of a general sense of obligation to the latter for their sustenance. These conditions of life, and the resultant traits of character that were formed, were largely the conservators of that healthfulness of mind and body which characterized the negro slave.

Certain of the diseases which are now the bane of the negro's existence were then comparatively unknown, and this is notably true of insanity and tuberculosis. According to the testimony of travelers and natives, consumption and mental disease are almost unknown among the savage tribes of Africa. Among the slaves of the Southern States, also, these diseases appear to have been conspicuously rare, according to the experience of individual observers. In fact, there are many intelligent people of competent authority and of full acquaintance with the negro who unhesitatingly state that they never saw a consumptive or insane negro of unmixed blood in the South prior to emancipation. This fact I believe to be so well established, although owing to the lack of authoritative statistics taken at that time it cannot be verified by actual figures, that I will not add to this discussion

by the introduction of additional personal testimony to this effect, but will inquire what is and has been the history of the negro as to these diseases, insanity and consumption, since emancipation.

Abundant testimony from reliable sources is not wanting to establish the fact that negroes now no longer enjoy immunity from these maladies, but that they are dying much more rapidly from them than the whites.

For the verification of this statement let us look at the census returns and at the testimony of our hospitals for the insane.

INCREASE OF INSANITY.

No one in this day places a too implicit confidence in statistics, and in the figures that I shall cite they have only a relative significance, but as a just comparison between the whites and the blacks in the different census enumerations they have a reconciled value, and show unmistakably that brain diseases have become more common in the negroes as compared with the whites.

According to the figures of the Census office, the colored insane of the United States were: In 1860, at a ratio of 169 per million inhabitants; in 1870, at a ratio of 367 per million inhabitants; in 1880, at a ratio of 912 per million inhabitants; in 1890, at a ratio of 886 per million inhabitants; or, stated in another way, the ratio of insanity per million among the negroes has increased from one-fifth as common in 1870 to one-half as common in 1890—a number, as these accumulated statistics show, alarmingly large and on the increase.

In speaking of the increase of insanity in the colored population of Georgia, Dr. Powell, superintendent of the Georgia Insane Asylum, makes the following comments: "There has been a radical change in the susceptibility to certain diseases, notably insanity, phthisis and similar maladies in this class of our population, from which they were almost entirely exempt up to 1867. The census of 1860 will show that there were only 44 insane negroes in the State of Georgia, or one insane negro in every 10,584 of the population, and consumption in the full-blooded negro was rarely seen. The census of 1870 shows 129 insane negroes in this State, or one to every 4,225 of the population. The census of 1880 gives 411 colored insane, or one to

every 1,764 of the population; while in 1890 there were 910 colored insane, or one to every 943 of the population."

VIRGINIA'S INSANE.

Dr. Drewry recently stated that "the ratio of insanity in the whites is slightly larger in Virginia than in the negroes, though in recent years insanity has increased more rapidly among the latter than the former, and that there are now 870 negro insane under hospital treatment in Virginia; and that during the past two years 170 insane have died in jail or at their homes waiting for room to occur at the Central Hospital." He very significantly remarks that the above figures do not cover all the negro insane in this State.

By other authorities it has been claimed that the increase of insanity among the negroes in Virginia has been for twenty-five years at the rate of 100, or more, per cent. every ten years.

As a summary of the foregoing, it may be briefly stated that "in the returns from death from consumption in the last five years the colored death rate is nearly triple that of the whites," and that the increase in insanity among the negroes now nearly approximates that of the whites—this alarming increase in the former being especially notable, if we remember that in one hospital in this State at present there are 105 more insane negroes than there were in the entire United States in 1880.

The testimony that has been adduced, then, appears to me ample and conclusive as to the following points:

(1) That insanity and consumption were comparatively infrequent in the negro race before the war.

(2) That both of these diseases have disproportionately increased in the same race since the war.

(3) That the causes that give rise to one of these diseases also produce the other; and

(4) That the negro race is especially liable to certain forms of nervous disease.

The question now naturally arises, What is the cause for this rapid and remarkable transformation in the health of these people during the short period of three decades? Why should insanity and consumption develop side by side, and at an equal pace? Have the changes in the environments of the negro had

ought to do with this state of things; or, in other words, what is the relation of freedom to these diseases?

LAWS OF SLAVERY.

To arrive at a correct solution of these questions, and to appreciate the effects of the changed political and social relations, because of freedom, on the mental, moral and physical constitution of the negro, it is necessary to know his manner of life during the ante-bellum and post-bellum periods of his history.

Up to 1865 it was to the interest of the owners of Southern slaves not to allow them to violate the laws of health; therefore, their hygienic surroundings were carefully and cautiously guarded from their youth through life. Their lives, from necessity, were regular and systematic, and they were absolutely restrained from all dissipation and excesses, and when sick they promptly had from the family physician the very best medical attention and nursing, and were carefully treated in every respect until pronounced fully restored by the physician.

Freedom came to him, and a change came over his entire life. Freedom removed all hygienic restraints, and they were no longer obedient to the inexorable laws of health, plunging into all sorts of excesses and vices, leading irregular lives, and having apparently little or no control over their appetites and passions. It is very manifest that these morbid tendencies and susceptibilities have been growing and taking deeper root for the past thirty years; hence their unstable condition and their susceptibility to and inability to resist attacks of disease that were formerly almost unknown among them. (Powell.)

In the wholesale violation of these hygienic laws after the war, as previously stated, was laid the foundation of the degeneration of the physical and mental constitution of the negro. Licentiousness left its slimy trail of sometimes ineradicable disease upon his physical being, and neglected bronchitis, pneumonia and pleurisy lent their helping hand toward lung degeneration.

PSYCHOLOGICAL TENDENCIES.

Now, ladies and gentlemen, having shown the effect of freedom upon the physical and mental health of the negro, I would depict some of the psychological tendencies of this race, did I

not feel that I have already far too long craved your generous indulgence.

In this presence, however, with the story of the past sounding in my ears, and at this time, when the future of this race is so much discussed, I cannot forbear to trace for a moment the developmental tendencies of this unique and peculiar people. What I shall say shall be said with an open frankness, an unreserved candor, and a deliberateness of mature conviction that is born of a desire to do justice to this important subject.

In many of the public discussions of late there has been too much of sentiment, too little of scientific truth; and what I shall say applies to the race as a mass, and not to individuals, and is spoken in no carping or censorious spirit, but in a sense of fairness and justice to all concerned. I am not yet old enough to have forgotten the companionship of other days, the black boy who was raised by my side, nor the comradely sympathy of my old black mammy, now dead and gone to rest, who soothed me with her crooning lullabies and led me smiling into sleep; nor have I forgotten the true soul of the trusty slave, keeping a faith which hath no parallel in history.

A MORAL BEING.

Science has demonstrated that he is a moral being, without the high moral character or broad brain abilities of the white man, it being an anatomical fact that the average weight of the negro's brain is 42 ounces, while 49 ounces is the recognized average of the Caucasian; that his mental calibre is small, his brain convolutions being few and superficial, and his forms of insanity, principally mania, showing the involvement only of the lower physical strata of the brain.

If science thus demonstrates the negro's mental inferiority, certainly history, dating as far back as the time of Pepi, of the sixth dynasty of Egypt, 2,500 years B. C., proves his phylogeny to have been of an inferior type, and that the general characteristics of the negro of that date were the same as those of the negro of equatorial Africa to-day.

From the time of Genesis and the curse of Canaan, "A servant of servants shalt thou be to thy brethren," the negro has belonged to a subordinate race, and ancient history has left no records of his achievements as warrior, king or councilor, but

along its whole pathway he has plod in servitude, even from the day when the Cyrenian was laid hold upon and made to bear the cross of the fainting Christ.

The problem of adjusting and adapting this people to the environments of civilization has been left in these latter days to the white people of the South. Under the environments of slavery and under the tutelage of the whites, their worst character was uplifted and elevated, but under the present conditions of life, and under their own leaders, I do not hesitate to say that the race is degenerating and fast reverting to their original types of savagery. Under the old regime, the negro had for his preceptor and educator the most highly educated and moral class of the white people; at present, under the fancied antagonism of classes, and because of radical prejudices, the negro is used only for temporary purposes, and without regard to his future welfare or improvement. In domestic service, the mothers and fathers yet have the advantage of attrition to the whites, but their children are being raised by superannuated members of the family, who have neither the mental nor moral qualifications nor the proper self-control to educate and restrain them.

NEW ISSUE OF RACE.

This "new issue" of the race, essentially ignorant and superstitious, vicious and impulsive, idle and improvident, mentally never more than a half-grown child, without self-confidence or ambition, without originality or persistency of purpose; descended from the most inferior and degraded race of West Coast Africans, not at all equal to the Kaffirs or Zulus of South Africa or the Soudanese of Northern Africa—this type of the second generation, which to-day confronts our Southern civilization, is to any unbiased mind worse than the first.

Can they, with their history, with heredity, with their character, measure up to the necessary standard and the high requirements of this day? I answer no and I answer yes—no, if they continue the experiment under their own leadership; yes if they are willing to trust, faithfully and obediently, their leadership in education, in morals, and in government of State to the best thought and talent of the whites.

MENACE TO THE SOUTH.

The negro is in the South to remain, and all attempts at expatriation or deportation, or colonization, will be as vain as they are chimerical; he will remain, however, as a parasite upon the body politic, and unless led with consummate skill through the dangers that confront him he will become a standing menace to the welfare of the South.

The negro is nothing of a peasant; he never develops a country; he has made no material advancement, as their history since the war in the South will show; the race as a whole in Virginia to-day not paying five cents on the dollar of this State's taxes.

The history of this people in Hayti and Santo Domingo, with complete control of their own government, is too well known as a disastrous failure to require reiteration here. In Jamaica, even under British influences and allowed a fair proportion in the participation of government, they have made an absolute failure, and, from credible authority, have reverted to hoodooism and cannibalism; and the only experiment ever made by England in this country, when in the war of 1812 the English fleet under Admiral Cockburn carried off a large number of negroes from Tidewater, Virginia, to Halifax, Nova Scotia, and there colonized them, has been likewise a dismal failure, for I am informed by an eye-witness that, though left to themselves and supplied with all the privileges of education, they have dwindled to a mere handful, and are living in a condition of poverty and degradation that will sooner or later end in a state of brutal savagery.

QUESTION OF EDUCATION.

It may be pertinently asked if education would the better fit this race for the responsibilities before them. Surely so; but the history and statistics of the past thirty-five years in the South show that the negro neither desires a full and systematic education, nor has he, as a class, received any substantial benefits from it, for though there may be an occasional gleam of intellectual brilliancy, it is the exception, and the dark pall of ignorance still beclouds the race of Southern negroes, although the public school system, nineteen-twentieths of whose cost has been paid for by the whites, has been their common privilege.

Before this method of elevating the negro can be relied upon for their material advancement, experience has shown that the methods of education now in vogue must be changed, and that it must be industrial and mechanical, and, above all, that it must be directed by the maturer wisdom of the whites in order that intelligence may give dignity and beauty to his labor, and that, added to this, religion and morality may be weaved into the woof and warp of the practical affairs of the negro's daily life.

In order to uplift this race, the experiment of amalgamation and miscegenation has also been suggested, but Southern civilization stands aghast at such a thought. If such should ever occur, it will be the first time in the history of man that a Teutonic stock has so fallen. The Latin races naturally mingle their blood with any race they touch, but the Teutonic roots never.

And, furthermore, no one need fear that the negro race will so increase that numerically they will drive out the whites, for if I had the time and opportunity I could prove from statistics that their growth is not so real and so alarming as it may appear, for the enormous increase of the negro since the war has had much to do with his physical and intellectual degeneracy, and in the end, if not counteracted, will react by a reversion to his primitive type.

The Anglo-Saxon blood has never yet gone down before any race, and never will: Says Grady: "The Anglo-Saxon blood has dominated always and everywhere. It fed Alfred when he wrote the charter of English Liberty; it gathered about Hampden as he stood beneath the oak; it thundered in Cromwell's veins as he fought his king; it humbled Napoleon at Waterloo; it has touched the desert and jungle with undying glory; it carried the drumbeat of England around the world and spread on every continent the gospel of liberty and of God; it established the republic, carved it from the wilderness, conquered it from the Indians, wrested it from England, and at last, stilling its own tumult, consecrated it forever as the home of the Anglo-Saxon and the theater of his transcending achievement. Never one foot of it can be surrendered while that blood lives in American veins and feeds American hearts to the domination of an alien and inferior race."

I speak this in no spirit of prejudice or malice. I but state a fact, I but speak the truth. Neither do I agree with those sensationalists who think that the day is coming when the Anglo-Saxon will make a holocaust of the negro—such a proposition is simply preposterous, for I am no pessimist, and I have too much faith in human kind not to believe that white supremacy will make itself felt before that day to the everlasting good of the negro race.

No, the negro will remain with us in the South, if he will but give up his aspirations to full citizenship and confide his education and government to the whites, who, in times past, have proved their love for him—remain in peace, remain to fill the offices for which God and nature designed him, remain to be the white man's servant, "hewers of wood and drawers of water." Some kind of restraining and inhibitory influences, such as once characterized the institution of slavery, must be thrown around him as a safeguard for many years to come, or there will be a continued degeneracy and a tendency to a reversion to his primitive type as a savage.

He must eliminate himself directly from the body politic, and the education which he is capable of taking will the better fit him to gravitate to his appointed place in the onward march of Southern civilization. This is the problem for the South; to carry these two races in peace, for discord means ruin; to carry them separately, for assimilation means debasement; to carry them in equal justice, for to this she is pledged; to carry them even unto the end, for this is her destiny. This burden no other people bears to-day; on none other hath it ever rested.

TWO HUNDRED OPERATIVE CASES—INSANE WOMEN.

*By Richard M. Bucke, M. D.,
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I have in the past taken up so much of your time that to speak the truth I almost fear to infringe upon it further. If I do so it is your own fault. The indulgence you have extended toward me encourages me to again address you. I will not, however, upon this occasion tax your patience as I have done so often in the past. My intention to-day is comparatively innocent. I propose simply to make a report to you of our gynecological work at the London asylum down to date in order that you may see what we are at present doing and what results we have so far achieved.

We have examined 256 women, nearly in every case under an anæsthetic. In these 256 cases we have found structural disease in the uterus, ovaries or their adnexa, 219 times. We have operated in 200 of these cases. In three more of the 219 we intend to operate immediately. The other 16, although there was disease, were not considered suitable cases for operation.

The diseased conditions found in the 219 women were as follows: There was subinvolution or endometritis or both in 146 cases; diseased or lacerated cervix in 71; polypus of the cervix in 5; retroverted or prolapsed uterus in 77; new growths, fibroids, etc., in 19; diseased ovaries or tubes or both in 39; perineal tears and fistulæ in 36. That is 393 diseased conditions in the 219 women.

The operations performed in the 200 cases, so far attended to, have been: Curettage, 151 times; trachelorrhaphy or amputation of the cervix, 62 times; Alexander's operation for retroversion, 44 times; ventro-suspension of uterus, 16 times; perineor-

rhaphy, 31 times; ovariectomy, 26 times; hysterectomy, 25 times; myomectomy, 5 times; cœliotomy for tubercular peritonitis, twice; or 362 operations in the 200 cases.

The result of these operations stated in general terms has been: In the first place, 4 deaths; in the other 196 women the bodily health has been either restored or improved in nearly every case. Upon the mental condition the result has been the recovery from insanity of 83 women; the marked mental improvement of 45 other women, leaving (to date) 68 of the 196 women so far mentally unimproved. But it must be borne in mind that several of the patients recently operated upon and so far unchanged mentally, are liable to improve or recover and that several of the patients who to-day are set down as improved are liable to become, after a longer time, quite well.

One of the most interesting points in our experience has been the diversity in the result of the operation corresponding to the diversity in the organ operated upon, that is corresponding to the character of the disease removed. And in order to bring this point out more clearly I will include now in our consideration 63 operations other than gynæcological done also within the last five years.

These 63 operations in general surgery were many of them Bassini's for hernia—the others were mostly removal of new growths. As a result of these 63 operations we had only one mental recovery. While as stated we had 83 mental recoveries after the operations in the 200 gynæcological cases.

If now we classify the 196 cases which continued to live after the operation, we find that of 13 cases of torn perineæ and operations for fistula, only 2 recovered mental health. Of 21 cases of removal of tumors only 8 recovered; while of 54 cases of cure of prolapsed uteri and adnexa, 23, or nearly one-half, recovered. Of 83 cases of removal of disease of the body of the uterus, or of the cervix, 35, also nearly one-half, recovered; while of 25 cases of removal of disease of the ovaries or tubes or both, no less than 15 recovered.

The meaning of these facts seems to be that of the diseased conditions under consideration, diseases of ovaries and tubes have the most influence upon the mental health of the patient, that is, the most influence in the causation of insanity. That disease of the body of the uterus and cervix comes next in im-

portance as a cause of mental disturbance; that uterine tumors and tears of the perineum, rank still lower. While ordinary surgical diseases, such as hernia and tumors of the body at large seem to have no influence at all as causes of such disturbance.

This, it seems to me, is exactly what we might expect—the ovaries and tubes being the most vital, the most highly organized, the most intimately associated with the mental and spiritual life, of all the organs under consideration. The uterus and cervix being the next most vital and highly organized, and so on to ordinary surgical diseases which do not appear to exercise any influence in the causation of insanity.

But, it will be said, if so many cases of insanity at London asylum are really cured or bettered by this method of treatment, which at that institution at least is new, then the statistics of the asylum should show the influence of the new factor. Well, so they do. For instance: The average recovery rate, including cases improved, in the male halls of London asylum, for the four years, 1892–5, calculated upon the whole number under treatment each year was 5.1 per cent. For the four years, 1896–9, it was 4.7 per cent. The average recovery rate, including cases improved, in the female halls of the asylum, for the four years, 1892–5, calculated upon the whole number under treatment each year was 4 per cent.; while for the four years, 1896–9 (after the operative work had become a factor), it rose to 5.55 per cent.

Again the average recovery rate, including cases improved, calculated upon the admissions, was, in the male halls, during the four years, 1892–5, 34 per cent., and in the four years, 1896–9, it was 37 per cent.

In the female halls for the four years, 1892–5, the recovery rate, calculated upon the admissions, including cases improved, was 35 per cent., but in the four years, 1896–9 (after the operative work had become a factor), it rose to 51 per cent.

There is still another way that the same fact can be presented. For the last twelve years the number of patients in residence and the annual admissions have remained about the same year by year; and on the men's side the recovery rate has also remained practically stationary. But not so on the women's side of the house. For instance: During the four years, 1888–91, a total of 76 women were discharged from the asylum recovered and improved; during the next four years (in the course of the last one of which we

operated on 19 cases, 3 of which recovered and were discharged before the end of the year)—in the next four years, 1892-5, 93 women were discharged recovered and improved. But during the last four years, 1896-9 (throughout which period nearly all our operative work has been done) no less than 130 women have been discharged recovered and improved. This means that certainly over 40 women and probably nearer 50, in the last four years, have owed their discharge from the asylum (recovered or improved) to this operative work, and that without it they would be at the present time either dead or still residents of the asylum.

In conclusion I want to say that we never in any case operate for insanity. We deal with our patients just as if they were sane. A woman is admitted to the asylum; she is sick; we find on examination that she has a subinvolted uterus, an ovarian tumor, or a lacerated perineum; we remedy the defect if we can, whatever it is, knowing well that her general health cannot be brought up to par until that is done. Had the patient been sane, just sick in the ordinary sense, the operation would equally have been required and we should have done it; or the woman may be an epileptic and her recovery from insanity may be hopeless; it makes no difference; we perform whatever operation (if any) is indicated by the woman's physical condition; it is for that we operate; if her mental condition is also improved or restored we are glad, though we did not operate for that. But even if a sane woman has an ovarian cyst or a retroverted uterus or torn perineum, and is cured by an operation, is not her mental condition improved? In both cases the mental improvement or recovery, if it occurs, is a very natural result of relief from physical disability, disease and suffering.

DISCUSSION.

DR. MANTON: I have a great deal of hesitation in attempting to discuss this paper before a body of alienists. I remember that when something like forty years ago, Dr. Storer brought up this subject before the American Medical Association, he was not only laughed to scorn, but so much contumely was heaped upon his head, that the subject was dropped. However, I feel a good deal of interest in this subject, being the father of the systematic gynecologic treatment of insane women and having had a large number of these women, several thousands, under my care. When Dr. Hurd appointed me gynecologist to the Eastern Michigan Asylum, there was next to nothing done along this line. Since then I have observed with a great deal

of pleasure the increasing interest which the alienist has taken in this subject and have watched with satisfaction the coming round of the alienist to the standpoint of the conservative gynæcologist. The gynæcologist possibly has been a little rash in advising surgical work in insanity, but we are well satisfied with what has been accomplished and we are looking forward to what may be accomplished in the future. I have read with pleasure the papers of Dr. Bucke and his assistant Dr. Hobbs, and I agree with nearly everything that both these gentlemen have stated. But I have wondered how it is they get such a large recovery rate, while we in Michigan, doing the same operations, are unable to obtain such excellent results. It was suggested at one of our societies last year, when Dr. Hobbs read a paper upon a subject similar to that of Dr. Bucke's, that possibly they had better gynæcologists over at the London institution and that might account for the results. Another explanation possibly is that the Canadians are rather more tolerant of "cranks" than we are in Michigan, and that many who find their way into our institutions would not be confined on the other side of the river. There is still another explanation. I was asking Dr. Christian what percentage of Canadians we had in the institution (Eastern Michigan Asylum) and he said, "Very large, very large." I came to the conclusion that possibly we got most of the degenerates from Canada who afterwards became seriously demented and that was the class of cases upon which I had been operating. The last report showed the recovery of patients upon whom I operated to be a trifle over 28 per cent. However, I am not willing to attribute the recovery of these patients altogether to the operative procedures. I think we are too apt to lose sight of the value of the asylum treatment of these patients and I do not believe if they had been operated upon immediately after their entrance they would have recovered as promptly as they did after the prolonged asylum treatment. I have a very large number of nervous women, many of them bordering on insanity, in my private practice, but I have never yet, either in asylum practice or in private practice, seen a case of insanity, other than puerperal, that could be attributed to pelvic disorder alone. And I also am ready to state that I have never yet seen a mental cure of insanity through purely surgical procedures. Many of these cases doubtless would have recovered without operation. As Dr. Bucke has just stated, I have never yet operated for the cure of insanity. We have always attempted to relieve the somatic condition and sometimes mental cure has followed, but I have never yet seen a case in which I would ascribe the cure entirely to operation. I have operated upon a large number of cases for the relief of organic disease and have never as a result of the operation seen a patient that was not benefited both physically and mentally. I am happy to have this opportunity to place myself on record before the Association as conservative in my ideas of the surgical treatment of the diseases of insane women with reference to the cure of insanity.

Dr. WOODSON: From the numerous papers of our friend, Dr. Bucke, I am constrained to believe that the percentage of disease of the generative organs of the Canadian woman is in excess of that of the American, and the operative procedures have been followed by a much larger percentage of recoveries than has fallen under the hands of myself or my assistants in my State,

I am glad indeed to hear Dr. Bucke say to-day that he operates only when he finds a pathological condition demanding an operation, that he operates on the insane as he would on the sane, and that he does not operate with the expectation of curing the mind. That is the ground I have always taken before this Society and in the institution with which I am connected. I have not as much faith in the cure of insanity by such operation, as the Doctor has. It was my pleasure, or perhaps not my pleasure to sit in the meeting of the American Medical Association at Denver two years ago and hear the alienist upbraided in most harsh terms for failing to operate, and isolated cases were reported that had gone not only from one physician to another, but from one gynecologist to another, and after being at an asylum, dropped into the hands of some special gynecologist in Philadelphia or Cleveland and were operated upon and cured. They never failed to denounce the alienist but they had nothing to say about the gynecologists who had charge of the patients while going the rounds. If Dr. Bucke's percentage were not so high I think the entire Association would think his paper orthodox.

Dr. RICHARDSON. Dr. Bucke, will you please state the percentage of cases and how many female patients you have had that have been operated upon.

Dr. JAMES RUSSELL: I arise to object to the idea Dr. Woodson has expressed about the Canadian woman. I think that the physical as well as the mental type of the Canadian women is in every way equal to that of the American women. (Applause.) And I deny most emphatically that they are more subject to disease of the generative organs than the American women. I could not let this occasion go by without entering my protest against such an assumption, but since I have already placed myself on record before this Association, it would be a waste of time for me to express myself again at the present time. Dr. Manton has expressed my views so well that I bow to him on this occasion and thank him for it.

Dr. MANTON: Mr. President, I found from a careful examination of a series of patients that more than 80 per cent. of cases, possibly 82 per cent. of cases examined, were suffering from some form of pelvic or abdominal disorder. This was an unselected series of cases. I would like to know the percentage of cases in which pelvic disorders are found in the women under Dr. Bucke's care.

Dr. POWELL: I would be glad to know the duration of insanity in the cases that have recovered.

Dr. BUCKE. Mr. President: The short paper which I have just read is only a resumé of our gynecological work to date; details will be found elsewhere. In most of the two hundred cases the insanity was of long standing—one or two to ten years and upwards. Dr. Manton says that in his experience he has never known operative interference of the kind in question to cure. I want to tell him of one case and ask if he would consider it cured. A young woman, a farmer's daughter, sixteen years of age, perfectly healthy, a handsome, splendid type of girl, was swinging in a barn on a high swing. The swing broke and she fell on her seat violently. She was picked up stunned and taken to the house. In a few weeks it was found her mind was

giving way. She became worse and worse, and was sent to an asylum. That was nineteen years ago. She remained in the asylum about five years. She did not recover, but she became less maniacal and was taken home to live with her friends. She lived at home for twelve years, all the time being insane. At the end of that twelve years she became worse; it was impossible to keep her at home. She was sent to the London asylum. She had been in the London asylum only a few days when she was examined under an anæsthetic. It was found that adhesive inflammation had existed among the pelvic organs and that the uterus, the tubes, the bladder and the colon were bound by it into a mass. She was operated upon. It took four hours and a half to disentangle the mass. It was disentangled. The next day that woman was sane, and to my knowledge she has been well ever since. I could give quite a few cases as striking as that, and I would like to know whether that could be considered a cure or not. (Applause.) I will give Dr. Manton or anybody else the facts in these cases and whenever possible they may see the patients, and I will establish just as good a cure as that in quite a number of cases. I did not claim that all cases are cured that recover after operation, but the enormous improvement in the recovery rate on the women's side shows that some influence has been at work, and I do not know of any other influence than this. In reply to Dr. Richardson, I would say that the number of women treated in the London asylum in five years has been about 800, of whom some 260 or 270 have been examined. These were simply picked out of the entire number as being the most likely cases—cases in which from some indication we thought there might be disease of the pelvic organs. Of course I do not think, and nobody would imagine, that the percentage of disease in the women examined is the percentage of diseased women in the asylums of America. The women examined by us were picked out because of the likelihood of some disease in those cases as shown by the history and symptoms, and the amount of disease found was as great a surprise to us as it could have been to anybody else.

IS THE ANGLO-SAXON RACE DEGENERATING?

By James Russell, M. D.,

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The subject of this paper propounds a question which to the ordinary observer may seem wholly at variance with common sense, and to the student of ethnology absurdly paradoxical. I freely admit that the spirit of the age and the general tone of public opinion, as well as the pride of race, are all adverse to the presumption that even a suspicion of degeneracy surrounds the question of Anglo-Saxon dominance throughout the world. It is a subject, however, that will bear investigation if for nothing else than to discover what our racial assets are and whether or not there may be an extravagant waste of brain energy, which is leading us on to mental bankruptcy.

For the purpose of this inquiry I shall include all peoples who speak the Anglo-Saxon language and whose racial characteristics and national aspirations conform to like methods of civilization. The racial line of cleavage at once includes Great Britain and her colonies and the North American Republic, for, though a vast admixture of foreign races is included in this classification, yet, with the exception of the Mongolian and African races, all the others are branches of the great Aryan family like ourselves. The process of assimilation conforms to Anglo-Saxon ideals and in time they become incorporated into full citizenship and gradually become inspired with the national aspirations of the country which gives them the protection of a home.

The inquiry affords a wide field for historical and ethnological research because it is only by tracing back the origin of our race and watching its rise and progress that we can have a proper conception of the causes which have contributed to its growth

and development. It is also important to know what racial characteristics have been prominent in enabling the race to forge ahead of other races in the onward march of civilization, and why it occupies such a dominant place in the world's history. It is also pertinent to inquire whether this race dominance is the outcome of natural causes which are permanent and enduring or whether it may be subject to disintegrating forces which if not controlled may undermine and destroy the whole national and social fabric of the race.

It may be said that the scope of the subject under review comes more within the range of ethnology and sociology than of psychology, and yet we find every branch of natural science so interdependent that we cannot study it intelligently as a whole without becoming conversant with it in all its branches. To study psychology successfully we must first have an acquaintance with biology, and to understand the sister branches of ethnology and sociology we must first have an acquaintance with both biology and psychology. As students of natural science in the specialty of psychology and as daily practical workers within our several institutions for the treatment of the insane we are continually in danger of having our minds contracted and our mental vision obscured within the narrow limits of conventional methods for the care and comfort of those committed to our charge. The tendency is ever to get into deep ruts of official routine to which we become more or less enslaved without taking thought of the great dynamic forces in operation around us. We would do well occasionally to cast our horoscope across a wider field of mental activity and take cognizance of the great world movements in operation which are either making for the upbuilding and betterment of our race, or it may be sowing the seed of future national and social dissolution and racial decay. The field is an inviting one for the enterprising student of psychological phenomena to exploit. The great cosmic forces in operation as exhibited in the intense intellectuality of the age and manifested in the fierce struggle for national supremacy, the competition among great powers in opening up and taking possession of the hitherto waste places of the earth, the subjugation of the weak by the strong, the formation of great corporations and trusts in place of individualism, the intense struggle for wealth and power, the wide diffusion of

knowledge among the masses, the wealth of discovery and invention, the wonderful provision for the weak and degenerate classes as evidencing the altruistic spirit of the age. All this and much more I might mention, symbolize to-day as it never did before in the world's history the mighty expansion of brain power. This explosion (if I may so term it) of brain energy during the present century and especially the latter half of it has so revolutionized every department of our social, commercial and industrial economy that we stand appalled and confounded at the magnitude and complexity of its operations. It is not to be wondered at that the great mass of the people were unprepared for such an upheaval of social and industrial energy, and that a large number of the more weakly endowed mentally would fail to adjust themselves to the altered conditions and swell the ranks of the dependent and degenerate classes.

RACE EVOLUTION.

The history of race evolution as far as we can trace it proves most conclusively that it is a slow and gradual process upward from the primary to the complex, from the homogeneous to the heterogeneous by a process of greater specialization in its organic and social structure. The whole phenomena of racial development teach us that it is acquired by a gradual adjustment of inner to external conditions, and whether we view it from the biological or the sociological standpoint the same law of adaptation of means to end is in progress. The natural law of progress is not by convulsive leaps and bounds but by slow accretion and infinitesimal change in structure, and covering a long period of time. Looking back through the history of the past among the different races of people of whom we have any authentic record we find that every epoch in the history of a race which has been marked by an intense expansion of mental force, whether expressed in art and literature or in military conquest, has been followed by reaction and national decay. Where are all the great races and nations of antiquity that were born, flourished, reached the zenith of their power and glory and then fell into decay? All sleeping in oblivion with nothing left but the ruins of their former greatness, or perchance a literature to perpetuate the memory of their intellectual vigor as well as their stupendous folly. Reasoning from analogy, for we can only

forecast the future by a knowledge of the past, what have we to say of the Anglo-Saxon race to which we belong? We know that less than two thousand years ago our forbears were comparative barbarians and with the most primitive form of civilization, and yet within that short period of time, after repeated invasions from Europe of Angles, Saxons, Normans and Danes, this admixture of races has produced the greatest civilization the world has ever known. Coming down through the centuries it has expanded itself from continent to continent and to the remote isles of the sea, with ever increasing momentum, and shedding light and knowledge into the dark places of the earth until it has reached a culmination in the present century of such an expression of brain power and intellectual activity unrivalled in recorded history. What is to be the outcome of this intense civilization with its highly vitalized brain energy manifesting itself in every department of human endeavor? Is it the natural outgrowth of the evolutionary process, or is it a dynamic, spasmodic operation of force expending itself in unnatural waste and out of consonance with natural law?

Is the human brain able to stand the test of such prodigious mental manifestation? Is it able to go on projecting itself into the future with an ever increasing ratio of momentum *ad infinitum*, or is it doomed by perversion of natural law to exhaustion and decay?

These are problems to which as psychologists we should address ourselves. It is our business to study every phase of mental phenomena; we are the mind searchers as well as the mind healers of the race. It is our special province to speak *ex cathedra* on such questions and public opinion has a right to hold us guilty if we remain silent. In the great struggle for existence between social and economic forces there is ever an increased complexity of relation requiring a greater differentiation of brain development, and as long as this is conducted on psychological lines there seems no limit to its attainment. On the other hand, if it can be shown that amid all this splendor of achievement there are exhausting, disintegrating processes at work which are slowly but surely undermining the whole moral and social fabric of the race, then it becomes us as scientists to sound the alarm and light up the hill tops of science with beacon fires of warning against impending dissolution.

LESSONS OF HISTORY.

History teaches us many useful and important lessons, but there is one lesson most pertinent to the present inquiry and it is this, That all the nations of antiquity of which we have any authentic record began to crumble at the very time they had reached the zenith of their power and glory; and further, That a proud, imperialistic spirit and lust of empire were the immediate forerunners of national dissolution.

It is significant for us to note that whether by coincidence or by historical sequence of like causes producing like effects there is manifest to-day a growing imperialistic idea in every branch of the Anglo-Saxon race. We have been accustomed to regard imperialism as the outgrowth of monarchical institutions, but even in the free democratic institutions of America we find an uncrowned imperialism already raising its haughty head. Coleridge, in his *Table Talks*, states, "The true key to the declension of the Roman Empire and which is not to be found in all Gibbon's immense work may be stated in two words—the imperial character overlying and finally destroying the national character." Let us hope history does not repeat itself in this particular and that the imperialistic spirit of to-day chastened and purified by the experience of the past may be the harbinger of peace among the nations of the earth. The Roman Empire increased in size through conquest out of proportion to social and national structure and there was no cohesive attraction between the conquered provinces and the central authority.

Autocratic and military despotism crushed out every feeling of national aspiration. The Roman legions returned home in triumph laden with the spoils of foreign conquest and Rome became the mistress of the world. Corrupted and enervated by wealth and intoxicated by power the rulers fell into every form of extravagance and sensuality. Internal dissension and jealousy soon began to manifest themselves, the central authority was weakened, the moral and social structure of the people loosened, and the nation crumbled into ruin and decay. It was no wonder the empire fell an easy prey to the hardy Goths, Vandals and Huns of Northern Europe.

In this rapid review of the decline and fall of Roman civilization we do well to institute a comparison in order to discover if

any of the causes which led to the overthrow of that great empire are present with us to-day. We have an advantage over them of fifteen centuries of nation building with many vicissitudes of fortune in our attempts to build up an Anglo-Saxon civilization on Roman models. It cannot be denied that we have made great progress over them in the art of constitutional government and in the extension of the rights of citizenship; the last stronghold of special privilege to surrender was the divine right of kings to rule. All power is now vested in the hands of the people and will be wielded wisely or unwisely in proportion to the diffusion of knowledge and the general standard of morality maintained.

PHILOSOPHY VS. CHRISTIANITY.

Unless we can show that the Anglo-Saxon race possesses inherent elements of permanence and continuity which the great nations of the past did not possess, what guarantee have we that history will not repeat itself and that we shall not pass through the same stages of national life that they did. It may be said that all the forms of civilization in the past were doomed to decay because they had not the living, vitalizing power of Christianity within them. Their ethical and moral teaching as well as their national aspirations were based on a cold and lifeless philosophy. The philosophy of Hedonism was all directed to a mode of life conducive to the welfare of the individual, whereas the philosophy of Christ taught the relation of the individual to the community and to a Divine power manifest in the universe. No civilization can be made to order; it must be the outcome of slow growth and its permanence and endurance will be in proportion to its observance of the great moral, social and physical laws which govern the universe.

We see evidence of this in abortive attempts to engraft a nineteenth century civilization upon heathen races, forgetting that civilization is not a matter of mechanical acquirement, but requires many generations to effect a permanent modification of character. We may apply an external veneer of morality among them and they may comply with certain ordinances and formulas which they do not understand, but they remain heathen still in their feelings and habits of thought. That is the reason why there is a race problem in America which cannot be solved.

The attempt to impose a civilization upon the colored race, which is foreign to every instinct of its nature, and which can only be acquired after a long process of evolution, must necessarily end in failure.

If it be proved that Christianity is the chief corner stone upon which our present civilization rests, it may be asked whether that agency is still potent to project that civilization into futurity with unabated vigor.

SCIENCE VS. THEOLOGY.

The early church had to contend against a learned philosophy for supremacy which after a long struggle and many persecutions it overcame. In our day the church has to contend against a more formidable force in natural science. Step by step science has pushed its conquests, beginning with the inorganic and denying the Mosaic cosmogony of creation as recorded in the book of Genesis, passing to the organic it denies that man is a special creation of God and makes him a product of evolution, passing then from the organic to the psychical it teaches that man expresses himself to his environment in direct ratio to the quantity and quality of his brain matter. In short the conception of science to-day in the cosmogony of the universe both organically and inorganically is the reign of natural law. The conflict between science and theology has been long and bitter. At first the church treated every demonstration of science with contempt, but the time came when it either had to defend itself or surrender. A reconciliation was attempted and theologians said a literal interpretation was absurd and that many things rejected by science were susceptible of explanation in allegory, metaphor and symbolism. At last the church stole the livery of science and began to teach evolution itself. An American divine, Henry Ward Beecher, was the first to preach it boldly from the pulpit and for doing so he was anathematized by theologians everywhere, and yet only thirteen years after his death it has been generally accepted by the church and the *immanence* of God is now recognized in evolution through the operation of natural law. Truly it may be said the skeptic of one generation is the orthodox of the next. In the meantime the search for a "modus vivendi" between science and theology produced an alarming amount of skepticism in the form of ma-

terialism which is still without the pale of the church. The age seems ripe for another church reformation and an intellectual and spiritual emancipation from obsolete creeds which cannot be preached, and from a dead formalism of traditional right and ceremony, the outcome of medieval superstition and spiritual darkness which are all the devices of men. A new flame of awakened spiritual consciousness begins to burn on the watch towers of Zion calling upon a recreant church to doff its external trappings of pride and presumption and return to the beauty and simplicity of the early church democracy when rich and poor met in brotherly love to partake of the mystic symbols of a Saviour's passion in the bare upper room at Jerusalem. There is a sad lack of reverence for sacred things everywhere. People go to church to be amused rather than instructed; the preaching is undergoing a gradual process of extinction, and the musical part of the service is the great attraction; churches compete with each other in providing high-class music to attract and entertain their congregations and the emotional and sentimental are appealed to rather than the spiritual and intellectual.

And yet, notwithstanding the lack of reverence for spiritual things, at no time was there ever a broader spirit of humanity abroad than the present. Human life was never held more sacred and the splendid provision made for every class of dependents and every class of suffering is one of the noblest tributes to our Christian civilization. Is the cry of famine heard in distant lands then the purse strings are opened and money pours out in rich abundance for its relief; are our soldiers fighting in foreign lands to establish the rights of freemen, then a nation's gratitude is poured out to those who risk their lives in defense of the sacred cause of liberty. In the social and commercial relations between individuals and nations we see evidence of a mutual business integrity without which everything would be chaos and confusion.

It may be said that this is only the natural evolution of man from lower to higher ideals of life and is quite irrespective of religious teaching. I do not so regard it. There can be no doubt that Christian teaching, imperfect though it may be, is the foundation upon which the whole fabric of our modern civilization rests. The fundamental basis of all civilization is the subjugation of egoism or selfishness and the growth of altruism

or love of others. This is a purely psychological process but must receive its impetus from some transcendent spiritualizing force which is foreign to man's human nature.

INTELLECTUALITY.

The literature of a race is a fair criterion of its intellectual vigor. Measured by this test we may fairly say that the Anglo-Saxon has exceeded all other races in the wealth of literature it has produced. On the other hand we must not forget that the standard of mental superiority must be determined more by the quality than the quantity of its literature. The whole history of civilization, both ancient and modern, has been one of action and reaction, of development and decay. European civilization slumbered for one thousand years in darkness and gloom after the fall of the Roman empire. The moral, social and intellectual forces of the people were exhausted and a long process of rest was necessary for recuperation.

The dawn of the Renaissance and the Revival of Learning were the watch words that Europe was rested, and that she had recovered from her social decrepitude and mental bankruptcy. In the meantime a new Teutonic civilization had engrafted itself on the old effete system, and bursting forth on the wings of a new inspiration, a mighty impetus was at once given to every branch of art, literature and science; light was evolved out of darkness and the wheels of progress again began to revolve. It has gone on with an ever increasing momentum until the last half of the present century has witnessed such a triumph of mind over matter that we stand appalled and confounded at the very richness and magnitude of our patrimony. The whole commercial, industrial and social conditions have so changed that we find ourselves at once face to face with complex conditions and problems requiring the very highest type of mental development for their solution.

That a large mass of the people are unequal to the task of adjusting themselves to the operation of such dynamic forces and falter by the way is not to be wondered at. It is only the highly vitalized brain, richly endowed by hereditary transmission and equipped by the best educational processes that is able to compete in the great struggle for existence. The submerged masses could not at once adapt themselves to such conditions,

and the harvest of incapables who fall to the rear in the struggle must necessarily be large. We try to explain the large increases in our insanity returns by our larger humanity and the ampler provision made for their care, but the mighty upheaval in our social and industrial conditions must be credited with a large and ever increasing proportion of it.

MENTAL DECLINE.

How long is this condition of things to go on? Are we to go on in the future still further exploiting the mysteries of science and adding discovery to discovery and invention to invention with an ever increasing complexity of conditions, or is there a limit to brain expansion which cannot be overstepped with impunity? Is it possible that we may have already over-stimulated the physiological process of brain activity and that suffering from brain exhaustion we shall gradually undergo a process of mental decay?

From the Elizabethan period downward the pages of English literature have been adorned by the names of men who have made a profound impression on the age in which they lived in moulding the character and habits of the people. The last of these great men died the other day in the person of John Ruskin, who inscribed his name in imperishable gold on the pages of English literature. Looking over the field of literature to-day it is sad to reflect that these men have left no successors, and what is worse there is no demand for them. At no age in the world's history was there ever such a surfeit of literature as to-day; in fact in every sense it is an age of literary dissipation. At least ninety per cent. of it is fiction and a good deal of it of a low and impure order at that. Now-a-days men have no time for reading except for recreation or business demands. They scan the morning newspaper for the war news, the stock exchange reports, or the latest horse race or prize-fight. The gambling spirit is dominant everywhere and is not confined to one sex. There is no time for deep reading or profound thinking; the mad struggle is for wealth. Literary barrenness is the consequence and the tendency is everywhere to superficial thinking with a little knowledge of everything. There are no great living poets, philosophers or divines whom the masses are looking to for guidance; they are not forthcoming because there is

no demand for them. The mind of the age is focussed on one great paramount idea—the acquisition of wealth.

Men are not satisfied now-a-days to make wealth by the slow operation of individual effort, but it must be made on a great scale through the operation of great corporations or trusts. Individualism is crushed out under the iron heel of monopoly. The great commercial and industrial interests are in the hands of joint stock monopolies and controlled by joint stock brains. The Captains of industry and the Napoleons of finance will soon be an extinct type. This monopoly of opportunity necessarily results in enormous wealth with its corresponding extravagance. Men toil while their families live in extravagance and luxury—the home is closed up, most of the time is spent in travel—the earth is traversed from the Occident to the Orient in search of change to relieve the monotonous ennui or the still more distressing neurasthenia, all the result of idleness and extravagant living. In no age as far as history teaches us has there been a race of people that withstood for any length of time the corrupting and enervating effects of wealth.

CONCLUSION.

In conclusion I plead guilty to a desire to pursue this subject further, but I am reminded that I have already exceeded the limit of time assigned to me by this Association. I confess to have already carried the subject beyond the range of psychology proper and have endeavored to interpret it along the line of its varied manifestations in the practical every-day affairs of life. The human brain is a composite organ and susceptible of enormous expansion and development, but like everything human it has its limitations. Whether or not it can stand the enormous strain of the present rate of activity and continue to project itself with unabated vigor into the future is the great problem now before us for discussion. If we are to be guided by the history of the past then we must answer in the negative.

I have pointed out many disintegrating processes at work which if not corrected will destroy the moral and intellectual fibre of the race. Two great laws are in operation—moral and physical—the observance of which make for the elevation of the race and they cannot be disregarded with impunity.

The immense virility of the Anglo-Saxon race like the sturdy oak may resist the encroachments of the canker worm for generations, but unless purged and purified of the disease it will at last crumble and decay. Whatever undercurrent evidences of degeneration there may be there is no apparent diminution of national power. The two great branches of the Anglo-Saxon family on both sides of the Atlantic never exhibited so much racial and national vitality as to-day. A great field of operation lies before the race in carrying the torch-light of civil and constitutional liberty to the dark places of the earth. Wherever the Union Jack and Stars and Stripes are planted, there ignorance, vice and oppression die out, and peace, prosperity and liberty are established. Let us hope that these two branches of a great family will forever stand shoulder to shoulder in the maintenance of peace and in advancing the world's civilization. May their swords never be unsheathed except in smiting the oppressor and in establishing the rights of civil and religious liberty. Such a union of racial and national power might arbitrate the peace of the world and go far to usher in that prophetic time,

“When the war drum thrills no longer,
And the battle flags are furled,
In the Parliament of man
The federation of the world.”

THE STATE OF NEW YORK—THE PATHOLOGY OF INSANITY.

*By P. M. Wise, M. D.,
President State Commission in Lunacy, New York, N. Y.*

The leading chapter in the century's history of the care and treatment of the insane in America will be the humane and progressive record of the Empire State. From the ward for insane in the New York Hospital in colonial days to the recent "State Care Act," New York has been abreast if not foremost in this eleemosynary duty to its dependents, as the sentiment of the time has indicated. The tardiness in providing for all the dependent insane by the State, was more than compensated by the imperial measures which carried the State care policy into effect. The great movement was not a revival of sentiment, sustained by the emotions, creating a name and then dying from inanition. It came to stay, and it has been supported faithfully, becoming a fixed public burden, and in this closing year of the century having no real opponent in the government of the commonwealth. "State care" has not been a name without other merit. Its purpose has been realized in a remarkable degree—remarkable in the fact that it is the only instance in the history of the States where the name has been merely an unrealized claim. There is to-day in the State of New York no acknowledged dependent insane person in an almshouse, penitentiary, jail, reformatory, or any other place of custody than a State hospital. Can this claim be made elsewhere? If so, it is a glorious example of a fearless State government following the precedent established by the Empire State. It is the antithesis of the shameful, cowardly, miserly policy of a wealthy State establishing almshouse treatment of the insane by law. An example which should make its

citizens responsible for it hide their faces from the Sun of Righteousness, who taught the doctrine of mercy and charity, "Inasmuch as ye have done it unto one of the least of these, my brethren, ye have done it unto me."

In carrying into practical effect the provisions of the State Care Act, the supervisory body—the State Commission in Lunacy*—found it expedient to establish a basis of co-operation between all the hospitals and institutions in its department. It was not only expedient but it was essentially requisite for the attainment of the great end in view—the most effective treatment and care of the insane in the most economical way. In addition to co-operation there must be a certain degree of uniformity in method and administrative practice. Not, take notice, in medical practice, for in this there was accorded the same freedom from interference, and allowances which existed theretofore, or which now obtains elsewhere. If uniformity of therapeutics, personal treatment, classification or research, resulted in some degree it came from association and not from direction. I can fearlessly appeal to the representatives of the department, superintendents of State hospitals, brother members of this Association, who I am proud to refer to as the best representatives of psychiatric practice in New York, for a confirmation of this statement. It was the policy and practice of my predecessor, as it has been of the writer, to allow the widest scope within the limits of safety and the welfare of the patient, to individual effort and experimentation. Otherwise progressive medicine would be a name only and dry rot an actuality. Thus co-operation and a scientific franchise to hospital physicians has created a psychiatric practice in our State hospitals which is unsurpassed, and which, I believe, will stand the test promulgated by a versatile neurologist, whose peerless imagination has been the delight of thousands in many editions and seven translations. However, it is well known that the prophetic and delightful parable painted in entrancing words by this masterful brother, was an actuality contemporaneous with his prophecy.

In investigation of the causes of insanity, in establishing the morbid anatomy of the brain, in pathological departments of hospitals for the insane, and in creating a special literature, New York has been a pioneer. The American Journal of Insanity,

* Hereafter referred to as the "Commission."

now in its fifty-sixth year, is the product of the Utica State Hospital in its earliest history. In his annual report for the year 1868, Dr. John P. Gray says: "I have long been convinced that the extensive field afforded by this institution for pathological investigation should be cultivated more thoroughly than could possibly be done by the ordinary medical staff." He called to the attention of the managers the importance of employing a professional man of special attainments and skill in the department of pathology, to make microscopic examination of the nervous tissues, and to test the value of instruments of precision for diagnosis, "and such other pathological researches as might be deemed valuable to medical science and the public generally." In his report four years later, he gives a resumé of the work accomplished, which appeared of sufficient importance to suggest legislative authority. A bill was unanimously passed the same year creating the position of special pathologist, and providing for the equipment of the laboratory, which was accomplished with the aid of Dr. J. J. Woodward, then Assistant Surgeon, U. S. A. The following year Dr. Gray reports, "the results so far attained in this field of special investigation have fully justified the expectations we had formed of the value and importance to medical science and the public interests, in recommending some years ago the organization of this department of research." There must be a number of those present who recall the fine technical work exhibited by Dr. Gray at several meetings of the Association about twenty-five years ago, as the product of the Utica laboratory. The experience at Utica, and especially the causes which led to the decadence of the laboratory, and finally to its extinction, is worthy of consideration at this time, as it applies now as it ever will, a lesson showing the mutual dependence of one department of medicine upon the other in the scientific work of hospitals. The special pathologist at Utica for the first three years was a gifted physician, Dr. E. R. Hum. It was his work which created the law establishing the laboratory as a permanent institution. He was succeeded by Theodore Deecke, a philosopher but not a physician, a master of technique but ignorant of symptoms, a man jealous of his department, possessing scientific attainments of high order, but too little sympathy with the expression of insanity as witnessed constantly by the physicians of the staff. His work was admirable, but inani-

mate. He could show the morbid conditions, but could not relate them with the clinical facts, and as a consequence his work became a mechanical process without application and died from the same causes which will ever destroy values by the separation of clinical and pathological research. It is a lesson which should have been heeded. The work at Utica however was sufficiently impressive to mould into the organic laws of the four later State hospitals provision for a special pathologist. The privilege was accepted in but two of the hospitals and only for a short period. The lesson taught at Utica was undoubtedly a restraining cause, and it was rather to the strict, and almost to the prohibitive separation of the pathological and clinical departments, that the other hospitals united all medical work in the regular medical staff, which in practical value exceeded all that was accomplished at Utica during the existence of the special department. Small laboratories of great comparative merit were earnestly worked by some of the hospital physicians from time to time. Had the minor and technical difficulties been overcome by capable instruction in these instances, the results might have been what we hope for but have not seen. The difficulties that are encountered by the hospital physician who wants to unite his clinical work with pathological research are almost insurmountable. Technique, in the interval between college and the evolution of a fixed point in view, leaves him stranded and he must begin at the bottom for his preparation. By the time he is prepared for good work there may come promotion and burial in administrative duties. The work he has done may be too immature for application, has failed of record, and is lost to his successor. Here and there may be some brilliant discovery in its incipient stage, but without persistent research it is soon buried in a mass of detail and lost to view.

With the co-operative spirit which was the hæmatin of the life-blood of the State care act, there was created the desire to unite pathological research, then in a more or less active stage in a number of the State hospitals, in a scientific center. The initial proposition led to quite active argument and no little opposition grounded on common sense and experience. Perhaps the most forceful argument against this movement—and experience has actually proved it prophetic—was the belief and the claim of several superintendents, that centralization of research

in a great central laboratory would dampen the ardor of individual hospitals, and especially of individual members of the medical staff, who would be debarred from working on original lines, without the approval of the central laboratory or the supervising pathologist.* It is to be regretted that the discussion on the merits and demerits of centralizing research, which preceded the creation of the Pathological Institute, failed of record

* From the Eighth Annual Report, for the year 1894, of the St. Lawrence State Hospital: "Closely associated with the clinical study of insanity is that of pathological and etiological research. It is maintained that these questions, mighty in themselves, could better be assigned to some separate department of the State service; and this is undoubtedly true if the State desires to add to its eleemosynary work that of scientific investigation. It may well be considered doubtful if the State government will look favorably upon this additional burden. It is also questionable if the results that would be obtained would far exceed previous efforts in pathological work carried on in a distinct department at one of the State hospitals at large expense to the State. The usefulness of a central (or common) laboratory for all the State hospitals will depend wholly upon the personnel of its organization, and the same chances will thus have to be taken that each medical superintendent assumes in the appointment of his medical staff officers, with less chance of correcting errors. The temptation to make a central laboratory useful for the community in which it is situated, and for the individual in its organization, to the exclusion of distant institutions, will not always be resisted. It will also reduce, if not dispossess, the individual hospitals of laboratory work, which is one of the strong inducements to young medical men to engage in hospital practice for temporary periods.

It is well to consider also that the best results in science have not emanated from public and paid work, but from voluntary efforts and frequently from obscure sources. The brains of men cannot be prodded to produce, like the soil, but must be stimulated by an interest that needs more than a departmental service to maintain. The technical work of a central laboratory may produce some beautiful results, as a fruit of exquisite technique, but conclusions based thereon will be thoroughly worthless, except in a combined study of the clinical aspect of the case. The physician who studies the cause and indications of disease from frequent observation of the patient, is the only competent person to reach conclusions from the morbid anatomy, that will be of any value to the human race. * * * In the functions of chemistry, bacteriology and microscopy, applied to clinical examination, the central laboratory can give no aid except as an instructor. It is doubtful whether a central laboratory will be useful, except as a coadjutor to the hospital laboratory; and it is far better to maintain the latter in a state of efficiency, increase the medical force sufficiently to permit a greater measure of pathological work, and keep the several departments of disease research together."

except in a few instances. The remaining impression of its astuteness, its prophetic foresight and the results which might reasonably be anticipated, would make it eminently fitted to supplement this discussion. At that time and for several years, the hospitals had accomplished much practical laboratory work chiefly related with clinical problems, although but little of the finer technical work had been attempted. Whatever was accomplished was wholly due to the praiseworthy spirit of research of individuals who would sacrifice selfish and personal interests and comforts to attain the end in view; and it may be recognized as a rule with no exceptions that from such material has developed the scientists of the class who has made pathology what it is to-day. The history of pathological advancement shows that it has not been the machinery and organization created with methodical acumen from an unlimited treasury to which is due original discoveries, but to the solitary individual, whose very needs create the stimulant to overcome difficulties, who perhaps in his earliest efforts before the possible demonstration, would have been mocked by a scientific center into discouragement and silence. The inception of revolutionary discoveries seems possible only to the isolated worker who ignores and defies skepticism, and who is independent of co-operative assistance. A Koch, a Pasteur and a Lister would never have been known if their primal theories had required for elucidation the approval of some directing scientist clothed with autocratic powers. Hence it was maintained—and correctly, I believe—that centralized research would retard if not give the death-blow to original individual efforts, unless they accorded with the “menu” of research in the central office. It is not held, I desire to emphasize, that such untoward conditions necessarily ensue upon centralization, but human tendencies are universally alike and the laws of action require an exception if other results than those described are realized. My observation at least of the short experience with centralized research in New York sustains the claim that the State hospital laboratory will cease to be a coadjutor of the central laboratory, as first designed, unless co-operation is made a requirement by the Commission.

In the fifth annual report of the Commission, for 1893, the subject of a pathologist is referred to in the following words: “The Commission would recur to the importance and desira-

bility of appointing an experienced and competent pathologist who should act for all the hospitals of the State. * * * *
The Commission now has under advisement a proposition for the appointment of such a pathologist as soon as his selection and the arrangements for a suitable laboratory can be determined upon."

The discussion by the State hospital superintendents of the action contemplated by the Commission, resulted finally in a united sentiment which was expressed in a resolution assenting to and approving of "the appointment of a pathologist of recognized reputation and qualifications, to be located in the city of New York, and preferably to be a teacher of pathology, the expenses to be borne by equal monthly payments from the funds of the several State hospitals."

In the sixth annual report of the Commission, for 1894, it recommended "that provision be made for the establishment and maintenance of a pathological laboratory or institute, under the direction of an accredited and competent pathologist, which shall be a department of the State hospital system, to be maintained primarily for the State hospitals, but incidentally for the benefit of all the institutions for the insane, as well as for such members of the medical profession at large, especially alienists and neurologists, as may desire under proper restrictions to avail themselves of its facilities in their investigations of the anatomy, physiology and pathology of the brain and nervous system." It will be observed that the Commission had in view primarily the benefit of the State hospitals. The laboratory was also to open its doors to all members of the profession desiring to avail themselves of its facilities. This was thoroughly impracticable as might well have been foreseen, for it gave an opportunity to divert the use of the laboratory to personal expedients. The director was fully justified in ignoring this proposed function.

In the report for 1895, the Commission announced the creation by statute of the "Pathological Institute of the State Hospitals," to be located in the city of New York, for the reason that besides being a medical center, there was located within a radius of sixty miles, more than two-thirds of the insane in the State. It repeats the declaration that the Institute is established primarily for the benefit of the State hospitals and "also to

provide instruction in brain pathology and allied subjects for the medical officers of the State hospitals, and to other members of the medical profession who may desire to avail themselves of the advantages afforded by this department."

During the year 1896, the Institute was located in the Metropolitan Life Insurance Building on Madison square, and occupying fully the front two-thirds of the sixth story, at an annual rental of more than six thousand dollars. The contention was that the location most central to the general hospitals, having an abundance of unobscured light and sufficiently cool to permit work to proceed continually during the hot season, was essential. In the following report (for 1896) the Commission announces the equipment and organization of the Institute, and sufficient progress "to demonstrate the wisdom of centralizing in one department the scientific investigations of all the hospitals in the yet obscure fields of pathology and causation of insanity." It is also here announced for the first time that the Institute is not to be confined to the study of pathology, to problems of insanity exclusively, but that investigation was to be comprehensive and unite all the branches of science which could be brought to bear upon the scientific study of mental disease. The Institute therefore established the departments of normal histology, pathological histology, cellular biology, bacteriology, physiological chemistry, psychology, anthropology and comparative neurology, and the persons in charge of the respective departments were known as associates, the whole being under the supervision of the director. There was also an associate who directly assisted the director in the administration of the Institute and a corps of lay employees known as librarian, archivist, preparator, indexer, accountant, stenographer, janitor and janitress, several having assistants. The expense of maintenance for one full year, exclusive of equipment, but including rentals, approximated forty thousand dollars.* The attention of legislative committees having the preparation of appropriation bills, was directed to the expenditures for the Institute by the financial statement required of the Commission. Fortunately, until 1899, the appropriation for the State care of the insane had been

*The appropriation for the year 1899 was thirty-six thousand dollars.

made by a direct tax on the people, collected as other State taxes, and the resultant was at the disposal of the Commission, under certain statutory restriction. In 1899 this was changed to a definite appropriation included in the general tax levy, and precise sums were appropriated for the specific purposes of the department. In this appropriation, and in spite of the earnest protest of the president of the Commission, a definite sum was named for the Institute, although quite sufficient for its purposes. To obtain this, it was necessary for the Commissioner to appear before the respective committees of the legislature and State with all the solemnity of an oath and upon his honor as an upright public servant that the amount asked for was requisite, that no further economies were possible, that the Institute was being conducted solely in accord with the purposes of its creation, and that the Commission vouched for the proper and most economical expenditure of the moneys. The question being wholly a professional one, the lay commissioners turned the responsibility over to the medical commissioner, as a matter upon which they were incapable of judging. There are certain periods in man's experience where ignorance is bliss unalloyed.

It is not my intention to criticise the development or the administration of the Pathological Institute. I should be pleased to see its scope widened beyond the present, and comprehensive enough to apply all the sciences to the great purpose in view; but I am constrained to hesitate when State care is overburdened to carry on in a proper manner the elementary needs of the insane, to recommend its increase by the addition of scientific research not pertinent in a broad sense to that department of charity. During the summer of 1899 the Institute was practically vacated for the three hot months, and although the professional element of the organization may have continued research elsewhere, it was an incident which excited inquiry and criticism, in great part directed at that Commissioner who vouched for the economical expenditure of the appropriation. The director was appealed to for an explanation and thenceforward until the present moment a constant effort has been sustained to determine how far and in what manner and to what purpose is the State justified in maintaining scientific institutions. If the Institute was created primarily for the benefit of the State hospitals, it has failed in its purpose, for the State

hospitals have been a small element in its consideration, and for reasons promulgated by the director, in an exposition of the methods of research commended by him.* He has set forth many truths in a brilliant manner, but he has failed to take into full account the worth of clinical methods and their union with pathological research; and this is the criticism from the hospitals. The critics in the profession at large are numerous, but one class can be cancelled as having personal ends to serve. Others complain of the Institute as a close corporation, although maintained by the people for the people. They want a manifestation of the educational feature which was announced upon its establishment.

After a serious and painstaking consideration of the several matters which seemed to form a proper basis for inquiry, the Commission invited Dr. Edward Cowles and Dr. G. Alder Blumer (members of this Association) and Dr. Councilman of Harvard University, to examine the scope and methods of the Institute, and report as to their value, the justification of the department of insanity in maintaining so comprehensive a scheme of research and the degree in which the present development of the Institute realizes the purposes of its creation.

The speaker represents the unanimous sentiment of the Commission in stating that the sole motive actuating it in the inquiries thus far made to formulate a basis of justifiable procedure for the Institute, is the enhancement of the purposes for which the Institute was established—the spirit of the organic law—and to mark the border lines of “correlation” with the allied sciences, beyond which the State or at least the department of insanity should not go. Any other motive is foreign to the Commission, and any other claim is baseless. In the face of a determined opposition in the last legislature to cut out the appropriation entirely, the Commission made as strong an appeal as it was possible to make, or ever has offered, for the continuance of the Institute; but only partially succeeded, by receiving an appropriation of twenty thousand dollars, and even this is hampered by an embarrassing provision which prohibits any expenditure for rent. I was informed by the chairman of

*Correlation of Sciences in the Investigation of Nervous and Mental Diseases.” Archives of Neurology and Psychopathology, Vol. I, 1898; By Ira Van Gieson, M. D.

one of the legislative committees, that the arguments offered by the nearer representatives of the Institute, were almost sufficient to defeat the appropriation. The ordinary legislator is not capable of appreciating scientific arguments, and is better moved by personal assurances of supervising officials. Preachers of science are quite out of place in legislative halls.

There can be no denial that the Pathological Institute has accomplished some excellent work, and has in course of inquiry questions of prime importance to psycho-pathology. It is to be regretted that all research it has instituted cannot go on to completion, even should it call for the application of labor and material not in the jurisdiction of the department. The question is evidently not whether the investigations of the Institute are of value, but whether it is properly maintained by the State, and especially by the lunacy department. Furthermore, whether it is accomplishing all the functions for which it was created. The Commission has been convinced by the most trustworthy authority, that these questions bear a negative phase that calls for early and radical changes in policy. It is sincerely to be hoped that the present organization may be modified by co-operation of the director to harmonize with the convictions of the Commission and continue the more valuable researches in progress to the greatest possible degree; but that remains an open question. The teaching function should become a greater feature, a prime feature, perhaps. It is the conception of a Commissioner that the work of the Institute might be prosecuted in two departments, although under one director, *teaching* and *research*, each of which should be conducted by an experienced physician preëminently qualified.

The report of the committee which served the Commission as well as the Institute, in its impartial investigation of the latter, is appended herewith (see Exhibit A) but the time allotted for this paper does not allow reading it without a suspension of the rules. This report shows with what care all issues involved both in inception and development were considered, and the committee has rendered an excellent service to the department, to the State and to science. For the scientific world is watching the experiment undertaken by New York, and abnormal tendencies would surely disrupt it in time; so that any effort which

aids in restoring the Institute to a normal or appropriate standard, renders an invaluable service to science.

I regret that it is not possible to announce at the present time the final determination of the Commission. It has endeavored to co-operate with the director to conform the future of the Institute to the funds available, and the requirements of service, scope and organization which in gross have been determined by the late inquiry, but thus far without avail. A pathological department for the State hospitals which is not administered in harmony with the State hospitals, and subject in some degree to their respective requirements as interpreted by their superintendents, is quite impossible as well as inappropriate. If the State desires to maintain a department of pure science, for science only, the medical profession in New York will cry God speed in one voice, and loudest of all the psychiatrists, but for the sake of all peaceful principles it should not burden the harmonious, hard-worked, conscientious and methodical lunacy department with it, but rather put it in the university department where research will have no restrictions. Then we may endeavor to organize a central laboratory for the State hospitals, as was primarily contemplated.

DR. WISE. Mr. President: I desire to say a word further. First, I wish to correct an error in the title of my paper, for which I am wholly to blame. It should read, "The State of New York—The Pathology of Insanity." The error consists in it reading, "The State of New York vs. the Pathology of Insanity," and I hope no member of the Association will think the State of New York occupies that position. I wish to say, also, that I have found some degree of apprehension among some of the members that New York was going to endeavor to precipitate a quarrel upon the Association. I think this apprehension is wholly ungrounded. New York has no quarrel on hand especially for the Association to settle. There may be differences of opinion, but at any rate the Association is not going to be asked to take any quarrel upon itself, and if it should be so requested, I hope it will turn it down, lay it on or under the table. It is not a function of the Association to pass upon local matters. It has always justly taken this position, and as far as I am concerned no such attempt is intended.

A few minutes before this session began, I received certain papers from Dr. Van Gleson. I asked him for authority to read them. He declined to give such authority. I asked him then, whether he declined to permit it. His position was neutral, hence, I thought it proper that I should read them. I think we should consider both sides, and as this is the only part of the other

side I have, I want to present the papers to you. The letter which accompanies this petition reads as follows: (Read.)*

This paper seems to be a petition but it is not addressed to the Association nor to anybody. (Read.)† The document does not contain the original signatures.

Then about half a minute later Dr. Van Gleson handed me these telegrams. (Read.)‡

This appears to be a letter from Dr. Dana. (Read.)‡

This is from the McGill University, Montreal, signed by Adams. (Read.)‡

I have nothing more to offer. This subject has been presented because of the general interest that has been shown in the experimental work in New York, and I have tried to present it to you in a historical spirit and free from prejudice.

Exhibit A.

NEW YORK, N. Y., February 5, 1900.

To the State Commission in Lunacy, Albany, N. Y.:

Gentlemen:—Pursuant to appointment by the State Commission in Lunacy, your committee to report on the work and scope of the Pathological Institute of the New York State Hospitals, met in New York city on February 3rd, 4th and 5th, 1900.

Your committee began its work by considering the history of the Institute as contained in the reports of the Lunacy Commission and elsewhere, to the end not only that it should fully apprehend the purpose of the legislature and the Commission in its foundation, but that it should also determine the degree to which the Institute had departed from that original and avowed purpose. It seems clear from the recommendation of the Commission in its Third Annual Report for 1891, (p. 272), that "a special pathologist for the use of all the State Hospitals," be appointed; and from that of the Sixth Annual Report for 1898-4, (p. 58), that the State should establish and maintain "a pathological laboratory or institute, under the direction of an accredited and competent pathologist which shall be maintained primarily for the State Hospitals;" and from the further suggestion in the Seventh Annual Report for 1894-5, (p. 104), that the proposed department of the State hospital system should "provide instruction in brain pathology and other subjects for the medical officers of the State Hospitals." It seems clear to your committee that the intent of the Commission was that the Institute should be a hand-maid of the hospitals and subserve their needs in all matters pertaining to the scientific aspects of the work, especially in the domain of pathology and pathological anatomy in close alliance with clinical observation and research.

Your committee appreciates the fact, that the Institute in the organization of its work, must necessarily have been given freedom to develop it gradually, and experimentally in some respects; but while recognizing the excel-

(*) See letter addressed to me published in *Medical News* of June 8th.

(†) The petition in same number.

(‡) *Medical News* of June 16th.

lent quality of much of the work that has been done, which has received high and authoritative commendation, the committee thinks that the Institute has failed to fulfil the specific purpose for which it was established. Instead of undertaking the problems of mental pathology, in practical conjunction with the several hospitals, it has widened the field of its operations on the basis of the federation of the medical and biological sciences under the leadership of psychology. It has given too great prominence in thus occupying the debatable ground of speculation, to the deduction of theories rather than to the study of the facts of science, on the principle that the work of the psychologist can explain living phenomena better than the pathological anatomist, provided the psychologist has the general knowledge of the medical sciences. Your committee approves academically of the correlation of the sciences, but believes that the attempt thus to correlate them is a departure from the function of the Pathological Institute.

It is the opinion of the committee that the failure, from the point of view of the State hospitals, has been due to too great diffusion of effort, whereas, the aim from the beginning should have been to establish closer relations between the clinical and pathological aspects of the work. In a word, the function of the Pathological Institute of the State Hospitals is not the correlation of sciences, but rather the correlation of the clinical needs of the physician with science. No estimate of these needs can leave out of consideration the duty of the State of New York to make adequate provision for instruction of the highest order for those who are called upon to minister to the insane, her dependent wards. As the State in its wisdom has taken wholly under its charge the care of the insane, their treatment and the use of clinical opportunities, these latter should be utilized in training to the fullest possible extent. The data of the hospitals is the material upon which the Institute should do its work. It seems to your committee that it cannot be too strongly insisted upon that the teaching function of the Institute must ever be its warrant for existence and a generous State support. Research work upon the problems of insanity, would naturally follow the carrying out of proper methods of instruction and cannot be successfully pursued without it.

The present Institute, your committee believes, has taught methods, not matter. If, as a laboratory, it had given the physicians in the service the opportunity to obtain accurate knowledge of the nervous system, the necessity for expansion would have been felt more and more in the direction of the clinical study of insanity. Such facilities could be better afforded in a central laboratory that should be in a closer contact with a State hospital than is possible in its present location; they should include short systematic courses of instruction to small classes of officers from the medical service, detailed in turn for this purpose from time to time, with the subsequent guidance of their work in the hospitals. Such an arrangement would permit an appropriate co-ordination of the clinical with the various other problems, pathological, psychological, physiological, chemical, etc., that present themselves for solution, and thus furnish the natural stimulus to scientific work and promote the steady growth of a professional spirit. It is believed that, under competent guidance, such a laboratory, if it were con-

nected with a small hospital to provide a sufficient variety of cases of insanity, would become a school of clinical psychiatry that would ultimately fulfil the great purpose that the legislature and the Commission had in view in establishing the present Institute. Your committee would therefore summarize its conclusions as follows:

1. The Pathological Institute should be maintained, but reorganized on a basis that shall have systematic teaching as its main function.
2. It should teach the fundamental principles whose study and application must lead to the clinical, anatomical and chemical research necessary for advancement in the curative and preventive treatment of insanity.
3. It should have as its director a physician who has had a training in clinical psychiatry, besides being a competent pathologist.
4. It should be located on property of the State, in a building of its own, as near to the metropolitan schools as is practicable.
5. As an essential of its teaching function, its building should adjoin, or be a part of, a small hospital for the insane for the reception of acute cases and others appropriate for investigation.
6. Entrance into the medical service of the State hospitals should be conditioned upon previous training in the Pathological Institute.

Respectfully submitted,

(Signed)

EDWARD COWLES,
WM. T. COUNCILMAN,
G. ALDER BLUMER.

DISCUSSION.

Dr. RUNGE: Mr. President. I feel entitled to say a few words on Dr. Wise's paper, because last year in my paper on "Our Work and Its Limitations," I took opportunity to eulogize the New York Pathological Institute, chiefly led by a misconception, as I see it now. 'Dr. Wise has convinced me that my conception of the Institute was not correct. It seems, from the communications read to-day, that other men, both on this side and the other side of the ocean, have a wrong conception of the Institute. If the Institute was established for the purpose of giving men an opportunity to learn some elementary things in blood examinations, etc., it will dwindle down to a mere State affair. I pointed, at that time, with pride to New York State, but I find I was mistaken and New York State is really just as far behind in giving real opportunity for original research as any other State of the Union. And I speak now not as the champion of anybody. Some of the names mentioned to-day are the names of men whom I know not to subscribe to the Pathological Institute as at present conducted. Were it conducted as we think it should be, it would be ideal. An Institute that would give us the work Dr. Hoch has spoken of, would be very valuable. I was wrong in my expression of praise and I would like to expunge my eulogistic remarks about the New York Pathological Institute and the State of New York.

DEGENERACY.

(PHENOMENA THAT ARE EXPLAINED OTHERWISE THAN BY GENERAL PRINCIPLES ARE NOT TRUSTWORTHILY EXPLAINED.)

By Orpheus Everts, M. D.
College Hill, Ohio.

Since the publication, some years since, of Max Nordau's widely-read book, "Degeneration," much attention has been given to the subject of possibly obtainable physical conditions in their relation to certain abnormal mental characteristics, not recognized as insanities, nor otherwise intelligently accounted for.

The term *degeneracy*, however, as now so freely employed colloquially, is without uniformity of meaning, or restricted definition. In the present discussion, necessarily limited and discursive, the term will be used as descriptive, in a general way, of physical conditions obtaining in the development of individuals of various characteristics, but groupable under the general heading, "The Defective Classes of Society," recognized, also, as "The Dependent Classes." This broad group embraces all persons who, by reason of mental defect, are incapable of self-support, as well as those who, by reason of mental deficiency, are incapable of perceiving the sinfulness of sin, or the beneficence of restraint therefrom.

That the intellectual status of all such persons is below the standard of common capability, characteristic of the societies to which they belong—and hence is suggestive of degeneracy, deterioration or growing worse—there can be no question, inasmuch as they represent the constitutionally insane and the constitutionally immoral or criminal.

By the phrase "constitutionally insane," reference is had to that great number of insane persons whose mental obliquities are manifestations of energized "potentialities of insanity" resident in their organizations from birth, however long dormant or however late in being mobilized.

By the phrase "constitutionally immoral," reference is had to that large class of persons who, because they are constitutionally incapable of complex moral perceptions, delight in immoralities and association with the wicked. To the defective understanding of such individuals, all pretention to virtue in others appears to be hypocrisy, and all restrictive law as the personification of injustice and oppression.

That the defective classes mentioned (there are others) have always furnished serious problems for the consideration of their more fortunate kindred, burdened and endangered by their existence, needs neither affirmation nor confirmation. That such problems have become more and more interesting with the accumulation of knowledge and advance of science—compelling modifications of ancestral notions, theories and practices, and effecting reforms in every direction, religious, social, and political—is equally patent to open-eyed observers.

There is in fact no problem of more immediate interest to society at the present time than that concerning the relation of the more intelligent, and hence the stronger classes toward the constitutionally defective, and hence the incompetent and immoral. Herein are involved questions of cause and effect, remedial experiments and future prospects.

It is needless to say that this problem would require more time and knowledge for its full discussion than are at my command at this moment. I propose, however, to glance at some of its more salient features—the alleged and real causes of degeneracy, the past and present treatment of the degenerate, with an intimation only of what may be anticipated.

Degeneracy is generally attributed to certain real, specific, readily comprehensible causes; such as alcoholic intoxication, luxurious and lascivious habits, overwork of the ambitious and avaricious; the "fast living," in short, of all complex civilizations characteristic of certain classes of people. It is but seldom, if ever, that these agents, aided and abetted by a mysterious co-conspirator called "Heredity," are questioned as to their true

relation to degeneracy, even by persons who are habitually inquisitive. And if the phenomena of degeneracy are to be accounted for, after the manner of mankind in a state of ignorance, by reference to superficial appearances, and personification of causes, instead of general principles, such alleged causes would seem to be indisputable. They are, however, as a matter of fact, as deceptive and pretentious as are the "alleged causes" of insanity, by which the statistics of our hospitals for the insane are periodically decorated—worse than worthless in a scientific investigation of the subject.

A Greek engineer saw water rise spontaneously in a pipe from which the air had been exhausted, and explained the phenomenon by alleging as a cause, Nature's abhorrence of a vacuum. The explanation was accepted, answered its purpose, but in time became worthless and absurd. Centuries later Sir Isaac Newton generalized a principle from his observation of familiar facts by which not only the phenomenon of water rising in the exhausted pipe, but all other phenomena of physical equilibration were scientifically accounted for and rendered anticipatable. So with all phenomena—psychic as well as physical—we must look deeper for primary causes than has been customarily done.

These alleged causes of degeneracy, like some, if not most, of the alleged causes of insanity—conditions nearly allied—especially the more conspicuous are, indeed, more intelligently recognizable as sequences than as antecedents of the conditions implied. For example, not two of a hundred habitual drinkers become habitual drunkards. The one who becomes a drunkard does so because of already defective, unstable, organization, incapable of resistance.

That defects of organization, once established, may be transmitted from parents to offspring, with increasing defectiveness, if both parents are alike delinquent, there can be no question. The beginnings of degeneracy, and hence the causes, however, must be looked for in a different field of observation—a field as different from that habitually explored as was the field in which Newton wrought from that familiar to Archimedes; as different as Darwin's was from that of Moses; as different as Mivart's was from that of the Church of Rome. It must be traced, in fact, to a universal principle, or we must be content with half-truths and false inferences respecting it.

Is there such a principle?

"This great God's fact, the Universe," as Carlyle was pleased to term it, is not a matter of happened-sos. It is not and never was a matter governed by stratagem, nor spasmodic special providences. It is the unification of all possible variety. It is the harmonization of all possible discord.

What is a "general principle"? It is one with the equivalent term, a "law of nature" which signifies neither more nor less than a uniform result of uniform procedure in the economics of nature or the universe, by an accurate knowledge of which we are enabled to infer past histories and anticipate future occurrences.

The general principle in accordance with which physiologic movements tending to degeneracy are primarily instituted may be designated as the law of *physiologic equilibration*. It is manifested by an inevitable reversal of physiologic processes at a certain culminating stage of development and a subsequent continuation in an opposite direction until a balance is restored. It is one, in fact, with gravitation and evolution—principles representing the necessities of the universe.

In other words, degeneracy is "an inevitable sequence of antecedent conditions," the more notable of which, comprehensively grouped, we call "civilization," whose most conspicuous feature is a marked departure from primary, typical, human conditions, manifested by an increase of intellectual capability and corresponding differences in modes of thinking and habits of living characteristic of civilized man.

That such a departure from a common centre cannot be continuous in a straight line is as obvious as the fact that the motions of matter are so ordered in the economy of nature that, whether of molecules or masses, motion is rotary and orbital, vorticular or spiral, but never linear; always tending toward, but never finding, rest. By such motions are affected the balances essential to the stability and integrity of all forms of matter—of the universe itself.

That such a deviation from a common, or typical, human development cannot be continuous in the same line without culmination and return toward more common conditions, may be known from the fact that all ancient civilizations, of whatever peoples,

did so culminate, and return, through an arc of degeneracy, to more primitive conditions.

Witness, also, the fact that in all great cities, the peculiar products of civilization, humanity is represented at one extreme by persons and classes of the higher grades of intellectual attainment, refinement of manners, purity of morals, everything, in short, that makes civilization desirable and commendable; and at the other extreme by persons and classes of the most converse character intellectually incapable, vulgar, obscene, squalid and criminal! And yet these persons and classes, be it understood, are of the same race, and are descended from a common ancestry, whose relative conditions are not accidental, nor exceptional, but so uniform as to be recognized as legitimate.

So unusual is it, likewise, for the descendants of an illustrious sire to occupy the plane of his attainments for even two or three generations, that such an incident is regarded as remarkable. He who is not equal or superior to his father may be regarded as retrogressing, touched already by the insidious finger of degeneracy.

Is degeneracy, then, so inevitable? Is there no remedy?

As a sequence of civilization, it must be recognized as inevitable; so inevitable, indeed, that a sagacious observer could predict with assurance that were all the criminals and insane now living congregated and smitten in one night with deadly pestilence, as were the armed hosts of Sennacherib, the capacious and numerous buildings now provided for their reformation and cure would hardly need repair before being required for the accommodation of a new accumulation of degenerates.

If by "remedy" are signified means by which the degenerate can be regenerated or restored to better conditions attained by ancestors—from which they are in a state of retrogression—there is no remedy. Neither religion, experience nor science offers any hope of such.

Historically considered, until quite recently, no systematic effort was ever made having such an end in view. Human practices correspond, generally, to human beliefs. The Christian world, for example, having believed always (until now) that all men are born alike depraved under the inexorable influence of heredity, redeemable only by religious observances and priestly interference; that all immoralities are instigated by a supernat-

ural monster, and all insanities are caused by evil spirits, pursuing and possessing the unfortunate insane, the defective classes of society were regarded and treated as outcasts, abandoned by God and hopelessly enslaved by the Prince of Evil.

In conformity with such belief—religious observances and priestly thaumaturgy having failed to correct the natural depravity of the constitutionally immoral or to cure the constitutionally insane, leaving society unprotected from their depredations—society protected itself by the time-honored method of punishing the offenders even unto death!

Do we shudder at the record? Why should we? Society was right! It acted responsively to its immediate necessities, according to its knowledge and beliefs. It is true that less than two centuries since, in accordance with British statutes, more than two hundred offenses—ranging all the way from high-treason to the theft of a sheep or a shilling—were punishable by death. But society believed at the same time—and believed it to be a crime meriting death not to believe—that the Creator of heaven and earth, and all things therein, had condemned the whole human race to die because of an offense committed by one man, an offense of so trivial a nature, literally considered, as to be unworthy of more than a paternal reprimand. Thus the apparent barbarity and cruelty, to say nothing of the injustice, was rational as well as necessary. For if the first law of nature commands us to preserve our own lives, the second commands us to kill whoever else endangers them!

Social relations, however, in Christian countries, have greatly changed within the present century. The disposition and effort of modern society, in its treatment of the defective classes, have been to reform the criminal and cure the insane.

With these ends in view it has practically abolished the death-penalty from criminal jurisprudence. Imprisonment has been so modified as to be, theoretically at least, reformatory and educational, rather than punitive or retaliatory. The insane are housed in palatial residences, with all modern improvements, wholesomely environed, and constantly attended by qualified servants and physicians paid by the State. Immorality is recognized as characteristic of persons of a low order of intelligence, still possessing somewhat befogged perceptions of its constitutional relationship. Insanity in all its forms is recognized as a

phenomenal manifestation of disease—disease, not of a supernatural entity called “the mind,” but of natural, material organs capable of manifesting mind by their functional activities, and of characterizing such manifestations by their peculiarities of structure and conditions. In consonance with these modern recognitions, both the criminal and the insane are now being treated.

With what results?

To deny the beneficence of present conditions, theories and practices affecting the defective classes of society, as compared with former notions and methods, would be to deny the whole philosophy of evolution, and development of mankind by growth; or to admit as a matter of fact that the present age is one of universal degeneracy so far as all Christian peoples are concerned. Such a conception would be indicative of a degree of pessimism that I for one have not yet reached, notwithstanding the disappointments of many, many years.

That the benefits resulting from such modifications of beliefs and methods have not been in accordance with expectations and promises does not detract from their value. But whatever benefits may have been conferred upon the defective classes, it must be admitted that the criminals have not been reformed nor the insane cured to any considerable extent. The most conspicuous result, so far as these classes are concerned, aside from being made more comfortable, has been a prolongation of their lives and an increase of their number as related to the general population. The greater beneficence has been, indeed, toward the advancing, rather than the retrogressing, classes of society. The strong have grown stronger by bearing the burden assumed. That the weakness of the weak has not been transmuted into strength was not their fault. As in business relations, the rich may contribute to the needs of the poor, and relieve them from much suffering, but cannot so improve their intellectual capabilities as to enable them all to get rich at the same time, so in the relation of the more perfect to the defective classes of society, the stronger may contribute—as they have done—to the general well-being of the weaker, but cannot by any known method stimulate new growths of impaired or defective structures essential to their regeneration or cure.

Shall we, then, confess to disappointment—we, who have de-

voted our lives to attempts at curing the insane. Disappointment, indeed, in this, as in all other matters, is an inevitable sequence of having expected too much. Our errors, too, of expectation, like all other errors, were the result of ignorance—ignorance of facts, and their significance, and consequent imperfect comprehension of the problem before us. Thus, for example, we had failed to appreciate the primal fact that all phenomena—including human existence, and mental manifestations—are expressions of, and determined by, modes of motion effected by the operation of infinite energy upon universal matter. Nor did we know the secondary fact, that the motions of matter thus effected, whether of atoms or of worlds, are so balanced as to limit their range, and maintain an equilibrium essential to their integrity, and the accomplishment of ends to be determined thereby. Furthermore, with these all other facts must harmonize to be of value as witnesses to truth. We were in ignorance, also, of the fact that heredity is not as it was generally conceived to be, a mysterious personage, performing specific functions in the economy of organization, but is only a manifestation of expectable conditions that are likely to obtain in the course of reproduction of living beings, in accordance with the law of uniformity so characteristic of natural processions, subject to such variations only as are permissible within the limits of organic necessities.

It is probable, too, that ancient notions respecting the constitution of man—regarding him as a dual being, a material and spiritual man, not alike amenable to the same laws, instead of a wholly natural man, a minute and ephemeral specialization of an endless aggregation of matter and force—becoming, existing, and disappearing as do all other living beings, so far as we can trace the evolution—had much to do by way of sophisticating our use of such facts as were more or less fully recognized.

But admitting failure to regenerate the degenerate, to reform the criminal and cure the insane classes of society, as was promised and expected by the prophets and apostles of the new sociologic and psychiatric regime, labor in that direction has not been without its reward. Beside a great and increasing amelioration of human suffering effected thereby, an expansive and ennobling sentiment of humanity has been cultivated, affecting other interests, and we have added to our stores of knowledge invaluable

accumulations. Our failure does not imply failure of design or execution on the part of the Supreme Intelligence to which we ascribe existence. Do we shrink from the conclusion that degeneracy is inevitable under certain conditions, from which recovery is impracticable? Is not death even more so? Who questions the Providence—the necessity—of death! The Infinite is not measurable by human perception or imagination. But such of us as have abiding confidence in “the eternal verities of the universe,” however mistaken we may have been in many of our personal estimates, find no occasion for alarm or anxiety. We have outgrown anticipation of a millennium; we have no fear of a grand catastrophe. We know that civilization, with its extreme inequalities, is better than the common level of antecedent savagery. We may listen patiently to the impatient clamor of zealous but narrow-minded reformers, demanding “some kind of a law” for the correction of human imperfections; a prohibitory liquor law, or a law prohibiting the marriage of defective men and women, expecting thereby to arrest degeneration and abolish sin, as well as disease, from the world; we may, finally, adopt asexualization as a surer and more expeditious means for the prevention of an intolerable increase of the degenerate classes—no light burden now upon the backs of the stronger. But whatever may be done by society, or not done, in this or any other matter, we may rest assured that the power and the wisdom of the Infinite, “from which all things proceed and by which all things are effected,” will be vindicated by results.

The pathway of human progress has been marked everywhere by monuments of human error, but for which human advancement would not have been recognized. Fortunately for our welfare and contentment, we can only see the monuments thus left behind by looking backward! Before us still are duty, hope, and expectation!

THE INSANE IN GENERAL HOSPITALS.

*By J. M. Mosher, M. D.,
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A half century before Pinel and Tuke's "Reform in the Treatment of the Insane," the inhabitants of the Province of Pennsylvania petitioned their House of Representatives for a "small provincial hospital," for the relief of the "insane or persons distempered in mind and deprived of their rational faculties." It was not the first institution for the insane graced with the title of hospital, for Bethlem had been in existence several hundred years, and St. Luke's, also in London, was opened in 1751. Neither of these institutions, however, had shown any purpose to improve upon methods of care then almost universal, and in fact they have often been cited as illustrations of the cruelties to which insane patients have been submitted.

The law adopted by the General Assembly of the Province of Pennsylvania, and approved by the Governor on the 11th of May, 1751, was entitled "An act to encourage the establishing of an hospital for the relief of the sick poor of this Province, and for the reception and cure of the insane," and provided for "collecting the patients into one common provincial hospital, properly disposed and appointed, where they may be comfortably subsisted, and their health taken care of at a small charge, and where by the blessing of God on the endeavors of skilful physicians and surgeons, their diseases may be cured and removed." In the humanity and charity of its purpose, this law anticipated the efforts of Pinel and Tuke, and by its recognition of insanity as disease and the establishment of a hospital for treatment and cure, epitomized the principles whose general application has not yet been fully attained.

The accumulation of chronic cases, in which lies the essential difference between the care of the insane and the bodily sick and injured, soon presented a formidable obstacle to the development of the plan inaugurated in Pennsylvania. The disastrous effects of crowding acute and chronic cases upon the same wards, with the consequent subordination of remedial to custodial measures, the insufficiency of proper accommodations and the growth of the almshouse system, with the long struggle for the remedy of these evils, are matters of recent history, well known not only to members of this Association, but to the public at large. Provision for the insane in proper buildings under suitable sanitary conditions having been accomplished, the problem of the medical treatment of recoverable cases confronts us now as it did the pioneer settlers of Pennsylvania a century and a half ago. During this time insane patients, with the occasional exception of quiet and manageable persons, have been refused admission to general hospitals, because general hospitals do not possess the power of detention or suitable accommodation for the insane.

The added experience of this period shows that the claims of two classes of insane patients—the acute and chronic—must be considered. For the latter custodial care is required, affording accommodations consistent with home surroundings; for the former active medical treatment looking to the restoration of health. Attempts at separate care of the acute cases have been premature and have failed, because, prior to the development of the large modern State hospital, its possibilities and limitations have not been revealed. It is advisable that provision for both these classes be made in the large public hospitals. An institution affording accommodations for one thousand or two thousand patients possesses resources in equipment and environment not to be obtained under any other known conditions. The development of the “acute hospital service,” the features of which are now being rapidly evolved, points the way to results commensurate with expectation.

Hospitals for the insane, however, are not always available. The natural reluctance of patients and their friends to commitment often prevents this step until the disease has reached a stage at which the chances of recovery are jeopardized; a considerable class need skilled medical observation before the ad-

visability of removal is determined; and many, especially drug and alcohol habitues, are in great measure irresponsible, but are not recognized by the law. With more manageable cases attempts at treatment are made at home, under unfavorable conditions, the physician yielding under the stress of necessity, and standing helplessly by, hoping against hope for some favorable turn of fortune. When home care is no longer possible, the unfortunate victim, in an outburst of violence or delirium, is hurried away to jail or some other convenient receptacle, his life in the balance, while precious time is consumed in judicial proceedings.

A statement of the abuses arising from this condition of affairs would present an appalling record. An insane woman gave birth to a child in jail, her only attendant being the jailor, who wrapped her new-born babe in an old shirt; a physician, delirious from neglect and the decrepitude of old age, was locked in a cell, where he refused food, abused his person, and in a few days died; a maniacal patient, who was allowed to wander about until he developed a state of great mental confusion, was found in an interior, unventilated, unlighted cell, entirely stripped of clothing, the straw and dust of a dirty tick filling the air, and his body besmeared with excrement. No effort has been made to collect data of this kind, and no hesitation is felt in presenting these incidents from a year's practice of the writer, for the experience is not local or unique, but illustrative of a practically universal condition.

In the light of such revelations, which concern recoverable cases, State care may be regarded as incomplete until existing necessities are supplemented by additional provision. To meet this want the erection of special hospitals or special pavilions in connection with general hospitals, has several times been suggested.* With the exception of the pavilion for the insane and emergency cases at Bellevue Hospital there is no intermediate provision of this kind in the United States.

The suggestion is about to be carried out in Albany by the erection of a pavilion in connection with the new Albany Hos-

* Henry M. Hurd: "Presidential Address: The Teaching of Psychiatry." *American Journal of Insanity*, October, 1899.

Frederick Peterson: "Some of the Problems of the Alienist." *American Journal of Insanity*, July, 1899.

pital. Under the stimulus of the repeated abuses that occur in the disposition of acute cases, the physicians of Albany represented to the county supervisors the need of this building, and have received a generous response in an appropriation of eighteen thousand dollars. The Albany Hospital is constructed upon the pavilion plan permitting the annexation of an additional building. The administration is to be in the hands of the governors of the hospital as a part of the general organization, the county's rights being protected by agreement to care for its patients at rates conforming to those for other public patients. The plan of the new building, which owes its perfection to the suggestions of Drs. Chapin and Cowles, has been prepared by Mr. A. W. Fuller, architect of the hospital.

The design provides a two-story building, for separation of the sexes, connected with the main hospital by a corridor, and conforming with the latter in architectural style. The outside dimensions are eighty by forty feet. From the main entrance to a large day-room, traversing the center of the building, sleeping rooms lie on either side of a corridor. This space provides for one single bed-room, 11x15, two single bed-rooms, 13x15, and an associate dormitory, 25x15. The day-room, with bow-windows at either end, supplies ample cross light, and adjoins the service rooms, thus permitting complete distinction between the day and night habitation. Beyond the service rooms, sixteen feet of the distal end of the building is separated by a double brick partition. This gives a distinct section, with entrance and stairway, containing two bed-rooms and service rooms for the care of excited patients. The disturbing element is thus removed from the quieter class during the night by half the length of the building, with several intervening doors and walls. The location of the pavilion protects the city from noise, which might otherwise be attained by special disposition of the windows of this extension.

The scheme thus outlined represents the logical development of the modern idea of the demands of the insane. There is no precedent upon which to formulate a prophecy of the ultimate field of usefulness or results. It is anticipated that this pavilion will furnish (1) transient accommodation for insane patients committed to a State institution; (2) for patients who need observation before the advisability of commitment to a State in-

stitution is determined; that it will be available (3) for mild cases of insanity who may recover in a general hospital; (4) for victims of drug addiction; and, lastly, as an emergency resort, will minister to (5) rapidly developing and critical cases of delirium, and (6) to the sudden and often dangerous forms of mental disorder which occur in the course of general diseases or after the shock of surgical operations and anæsthesia.

In this legitimate extension of its work the general hospital in no way conflicts with the institution for the insane, but becomes an adjunct or integral factor. As a clearing-house, opportunities are offered for the discrimination and preparation of patients for the latter which should add greatly to its effectiveness.

In conclusion it may be said that with the adaptation of the facilities afforded by the general hospital, all claims of the insane may be met, and as conditions demand, treatment may be had—

- (1) at home;
- (2) in private institutions;
- (3) in general hospitals;
 - (a) in out-patient departments;
 - (b) in specially arranged wards or pavilions;
- (4) in hospitals for the insane:
 - (a) in hospital structures for the active treatment of acute, recoverable cases;
 - (b) in detached blocks or colonies for the custodial care of chronic cases.

DISCUSSION.

Dr. WORCESTER: I should like to inquire, Mr. President, as to the conditions of admission to such a hospital. Patients in general hospitals are received under different conditions from those usually required in hospitals for the insane.

Dr. HENRY M. HURD: Whether such wards are practicable or not, and to what extent they are practicable or desirable are questions of great interest. I confess that while I consider such an extension of general hospital accommodation extremely desirable, it seems to me its range of utility will probably be comparatively limited. If the establishment of wards like these in connection with the various general hospitals is likely to satisfy the public demand for earlier treatment of the insane, I should regard it unfortunate that such effort be made. In other words, it seems to me that what we must look forward to in every large city with large hospitals is a psychopathic hospital, where cases of mental disease can be treated apart from other dis-

cases. There is probably no hospital in the larger cities better situated for the segregation of patients than the one with which I am connected in Baltimore. At the same time, an insane case or one suffering from a severe delirium never develops in the wards without interfering with the peace, comfort and quiet of all the other patients. It seems to me very doubtful whether it will ever be practicable to arrange wards for the insane in connection with a general hospital which will not be an annoyance to patients under treatment for other diseases. And so while I grant the desirability of some accommodation for the cases on the border-line of mental disease or for those who possibly are suffering from some transitory condition of delirium or from some drug habit, I think in every large city we should make an effort to establish a psychopathic hospital for the treatment and observation of cases of acute mental disease prior to their removal to larger institutions for the insane.

Dr. WISE: I merely wish to say a word on this question, which is of great interest to me at the present time because we have many problems in my State to solve, which I think have been better solved in Albany than anywhere else that I know of. The difficulty of disposing of the insane in that interval, which must necessarily exist between the removal from home and the certification of insanity or the commitment proper, must be of vital interest to all of us. I have watched the movement at Albany and I think the system adopted there is admirable and cannot well be very much improved upon. The hospital to which Dr. Hurd refers, is undoubtedly a progressive idea and one that sooner or later will find realization. But that is another question. The question now is, whether the commitment of delirious cases, the toxic cases and the cases now committed to hospitals for the insane and discharged from them in the course of a week or ten days as not insane, cannot be prevented by provision for ordinary treatment such as is made at the Albany hospital. In New York City this question is met in a very poor way by the establishment of a pavilion in connection with Bellevue Hospital for the detention of the temporarily or acute insane. In Brooklyn, the question will soon confront us upon the removal of the present State hospital. Some provision then must be made for the temporary care of the insane pending their commitment and treatment. It is a vital question of the hour, and I suppose it applies to all the larger towns in the country as well as it does to the larger cities in New York State. It would be interesting to have this discussion extended.

Dr. RICHARDSON: I simply wish to say that this problem has been receiving some attention in the city of Washington. The custom there is, to confine patients temporarily and there is a practice authorized by law of temporarily committing patients who are awaiting hearing in court to the Government Hospital for the Insane preliminary to this hearing, and the result has been very prejudicial, it seems to me, to the interest of the patient, for the reason that the patient is brought to the hospital and about the time he or she is settled down to the new surroundings and treatment is begun, the patient must be sent back to the court for a hearing and all the symptoms of the disease are likely to be brought up again by the excitement pending

the hearing. It has occurred to me several times that it would be a very great advantage if in connection with the general hospital, some such arrangement as Dr. Mosher has suggested and has established in Albany, should be instituted. This has been brought up recently in connection with the proposition to establish a municipal hospital in the city of Washington. The necessity is greater there because we have no probate court; the cases of insanity are heard by the Supreme Court in the District of Columbia and the practice is to set aside one day in the week for a hearing of these cases, and the hearing is consequently deferred at least a few days and some times over a second or possibly a third week on account of the condition of the patient. There has been another proposition to establish an inebriate ward in connection with the hospital. I admit there might be a useful application of such a ward to meet the necessities of such cases, although it would not fully answer all the requirements. Inebriates are not well treated in a ward of this kind. To treat them satisfactorily we should have diversified arrangements for the treatment of various types of cases and not only temporary treatment but continuous treatment, and the application of not only medicinal agents and restraint, but also employment and diversion and all those things which are necessary not only to keep the patient from the use of alcohol but also to restore the brain. I am glad to see Dr. Mosher has established this department, at least temporarily, and it will be watched with a great deal of interest by other cities.

Dr. BUSEY: In Colorado you must not expect too much of us, but in the city of Denver we are now erecting an institution of the most modern class, to accommodate one or two hundred cases of insanity in connection with the Arapahoe County Hospital. They are now preparing and in fact have adopted plans, and they expect to operate the institution in connection with the Arapahoe County Hospital and equip it with all the modern conveniences. And thus we will be able to look after these cases as they should be, temporarily, until they can be admitted to the State institution.

Dr. TOMLINSON: I shall watch this movement with a great deal of interest, but I fear that such an institution can have only a temporary success. There was an attempt made to establish such an institution in the Twin Cities in Minnesota some years ago; the object sought by those interested in the movement being the provision of some place where the insane could be cared for and treated without being legally committed and called insane. So far as my observation goes this and all other similar attempts have this object in common. The relatives and friends of the patient are much more interested in avoiding the public acknowledgment of the existence of insanity in the family, than they are in providing for its proper treatment. Therefore, if the hospital is a public one, those interested in the patient will bring every influence to bear to keep him there without regard to his condition; with the result that in a few years there would be established in the city a large institution for the insane, with all the disadvantages that would accrue from the necessarily restricted surroundings. It seems to me that all such attempts to solve the problem of the proper care and treatment of the insane, are analagous to the stuffing of an old hat into a broken

window pane; it keeps the wind out temporarily but does not replace the glass. Instead of this twisting and turning to avoid the fact of insanity, we should use every effort to educate public opinion to the point of appreciation of the fact that their conception of insanity is still the mediæval one and that as a result all legislation concerned with its management is of a like character. There is no more reason for the use of a legal procedure in sending an insane man to a hospital for treatment than there would be in the case of the same man if he was suffering from typhoid fever or pneumonia; because in either condition, he may be disturbed mentally and require restraint while under treatment. When the law first began to take cognizance of insanity, its administration was only concerned with the poor, because the wealthy took care of their defective relatives at home. In consequence of the fact that the insane were a public charge, an individual was looked upon either as a criminal or a pauper, according to the nature of his conduct. If he was simply demented, quiet but unable to support himself and requiring personal care, he was a pauper; but on the contrary, if his conduct was such as to interfere with the welfare, comfort or convenience of his neighbors, he was looked upon as a criminal. In the first case he was taken to the almshouse, while in the other he was confined in jail. In spite of the changes which have taken place in our knowledge of insanity and the improvement in the care of these unfortunate people, which the establishment of special institutions for their treatment has brought about, the conception of what constitutes insanity is practically unchanged; and even at this day, with its more general enlightenment, the public looks upon the insane man with fear and dread and the law deals with him as a criminal.

These opinions may appear to you to be radical, but as Dr. Russell said yesterday, that does not make any difference. When the time was ripe a Pinel and a Tuke exploded the demoniac superstition with regard to insanity. So, too, when public opinion is sufficiently enlightened, some one will explode the legal fiction which has grown out of the mediæval conception of the relation of the insane man to society.

Dr. Woodson: The commitment of insane to institutions is certainly a perplexing problem. I desire to express my appreciation for the excellent paper of Dr. Mosher, and to declare myself in hearty accord with the establishment of such institutions as he has spoken of. The General Assembly of the Commonwealth of Missouri, in 1897, enacted a law whereby the county clerk after being informed that an individual is insane in his county, can at once convene the county court to commit such a patient for care and treatment. It is necessary to have the certificates of two physicians to commit the individual. The insane man who wants to get into an institution can get in without any trouble. It is the man who does not want to get in and who is willing to spend his money to keep out that it is difficult to commit. It is a perplexing question, something I fancy it will be difficult to overcome, and it is questionable whether it will ever be overcome. The hospital may take out the inebriates and those suffering from acute delirium and so on, and unquestionably be of advantage when there is difficulty getting them to institutions.

Dr. SPRATLING: This is an interesting question and one that is destined to receive a great deal of attention. I do not, however, agree with Dr. Mosher that the insane should be sent to the general hospitals. I speak from experience at the Craig Colony for Epileptics, where all our patients are supposed to be sane, and when one of them becomes decidedly insane, he disturbs all the rest.

I think the solution lies in the establishment of psychopathic hospitals, if you please to call them so, or reception hospitals, if you please to call them that. These hospitals should be established near the large cities and they should be the gateways to the larger institutions. The pathological work done among the insane should be done in the psychopathic hospitals. If you admit the insane in general hospitals in New York State, you will have two boards of governors or managers for every hospital, and wherever there are two boards of this kind controlling one institution, you know what the result is destined to be.

Dr. DEWEY: The provision obtaining in Chicago is, as many of you know, a detention hospital to which all persons suspected of insanity, who come under police control, and those for whom a petition for a hearing in lunacy is made, are sent. The patients accumulate there during the week. On every Thursday the court holds session in a court room provided at the detention hospital and the persons committed during the week are then brought before the court, a jury trial is held in each case, and if found insane they are committed to the various State institutions or to the Cook County Asylum. This detention hospital has been a very great improvement upon the old method of simply confining all such persons in the jail until otherwise disposed of. The detention hospital is situated upon the grounds and is a part of and under the management of the Cook County Hospital, which is really the city hospital of the city of Chicago. The detention hospital has a resident physician and a number of female attendants who are graduates or are in training in the training school of the county hospital. The patients are fairly well taken care of, although the same difficulties exist there that always have and always will exist in institutions under the control of a political board of managers like the county commissioners of Cook county. A certain number of the patients are often found to be cases not suitable to be declared insane, such as cases of acute alcoholism, victims of drug habits, and epileptics with temporary attacks, and various patients of that kind. Such patients may be continued for another week or two for study and observation.

The disturbance and difficulty which has been mentioned by one or two speakers, that might arise from bringing insane persons into a general hospital does not play any rôle in the case of the detention hospital at Chicago. The building is situated a considerable distance from the other buildings of the hospital so that so far as I know very little disturbance comes in that way. One use has been made of the detention hospital in Chicago, which I may incidentally mention, that is perhaps of interest—that is the bringing of classes into the building for observation and study. While I was in Chicago continuously I for some years held a clinic there and was given use of the court room to bring patients in and present them to the classes. That is a use

that can be made of such institutions that will be of considerable advantage. One other observation I would like to make in reply to the objection raised by Dr. Tomlinson in regard to institutions of this kind, that people will invent excuses to prevent the patients being recorded or classed as insane. That is a difficulty we always have and always shall meet with, and unless the changes that Dr. Tomlinson says he does not anticipate in human nature occur, we shall probably have this difficulty for a long time to come; at least we shall meet with it ourselves during our natural life-time. The condition of insanity being what it is and the laws regarding interference with liberty being necessarily what they are, and ignorance and prejudice being rampant as they are, these difficulties we shall have to meet as best we can.

Dr. MOSHER: The discussion on the paper has called out all the facts. In reference to the definite questions asked as to how the patients are to be committed, we feel certain that the majority of patients will enter such an institution voluntarily. In reference to the involuntary commitments, the patients will come under the police regulations and will be sent to the hospital instead or to jail, if necessary. The State Commission in Lunacy will not exercise control over such patients until they are legally adjudged insane, when they can no longer remain.

SOME STATISTICS AND PARTIAL HISTORY OF THE INSANE IN VIRGINIA.

*By R. J. Preston, M. A., M. D.,
Superintendent Southwestern State Hospital, Marion, Virginia.*

It has seemed to me that it would be exceedingly appropriate at this time, when this Capital City of the Old Dominion is being honored by this meeting together here of distinguished alienists from all parts of our country and from other lands, if we could present a complete history or review of the insane in Virginia, from her Colonial period down to the present time. It is a source of regret that the time at my disposal and the available data at hand are entirely insufficient for the undertaking of such a task. I can only hope at this time to give, as indicated in the title, "Some Statistics and Partial History of the Insane in Virginia" and leave it to others to perfect and complete the same.

The ravages of two wars (the war of the revolution and the war between the States) have sadly marred and scarred the bosom of this old "Mother of States and Statemen," and destroyed many valuable statistics and records in this and other departments of State history, which can never be replaced.

We, as Virginians, claim, as a matter of State pride, the honor of having built the first hospital exclusively for the insane, on this continent. In colonial days, the house of Burgeses incorporated "the hospital for the reception of idiots, lunatics, and persons of insane or disordered mind," which was opened for the reception of patients September 14, 1773. Said hospital is perpetuated to-day as the Eastern State Hospital, at the old colonial capital, Williamsburg, Va. We would at the same time accord to our sister commonwealth of Pennsylvania

every mead of praise for original and prior efforts in providing wards for the insane in a general hospital in 1752, and also to our sister commonwealth of Maryland for like efforts in this direction, inaugurated in 1774 and carried into effect in 1797 in the establishment of the Maryland Hospital. It may be said too, in the words of Gov. Gilbert C. Walker, in his centennial address at Williamsburg in 1873, that "Virginia, in her deep poverty (in the days of reconstruction) established the first asylum for the poor colored man ever organized." Said asylum was established first at Richmond, Va., as "Howard's Grove Hospital," and in 1885, permanently established as the Central State Hospital, near Petersburg, Va., where to-day, nearly one thousand colored insane are cared for in magnificent buildings, splendidly equipped, under the able and skillful management of Dr. Wm. F. Drewry, in a manner that reflects great credit upon this old commonwealth and upon this age.

I have endeavored to prepare the following statistical table, showing the number of insane in the State hospitals at the end of each census decade (as far as obtainable) from the opening of the hospital in 1773 at Williamsburg down to the present time, and also the population of the State (white and colored) for each census, with the percentage of increase, comparatively, of the insane and the population.

These statistics have been compiled at considerable labor, owing as before said, to the destruction and loss of many valuable records. I have been unable to fill out the earlier census statistics of the Eastern Hospital, though I have had much correspondence and research, aided by the superintendents of the other State hospitals and others, to whom I wish to render thanks and acknowledgements:

INSANE POPULATION IN VIRGINIA STATE HOSPITALS OR ASYLUMS.

DATE.	Eastern Hospital.	Western Hospital.	Southwestern Hospital.	Central Hospital.	Percentage of increase of colored insane.	Total insane.	Percentage of increase.	Total white insane.	Percentage of increase.	Total population.	Percentage of increase.	White population.	Percentage of increase.	Number of white insane to population.	Colored population.	Percentage of increase.	Number of colored insane to population.
Sept. 30, 1790	...	...	...	...	...	...	...	...	...	747,610	...	442,117	...	...	305,498	...	...
Do 1790	...	...	...	...	...	...	...	...	...	880,200	17.6	514,280	10.6	...	305,920	13.2	...
Do 1800	20	...	...	...	...	...	...	...	...	974,000	10.6	551,514	7.2	...	423,086	15.6	...
Do 1810	85	...	...	...	...	...	...	...	...	1,065,116	9.3	603,085	9.3	...	462,031	9.6	...
Do 1820	43	...	...	...	...	...	...	...	...	1,211,465	15.8	691,300	15.3	...	517,105	12	...
Do 1830	58	16	...	...	...	...	...	...	...	1,230,797	23	740,908	6.7	...	498,389	...	...
Do 1840	78	100	...	...	...	...	...	...	...	1,481,661	14.6	891,800	20.9	...	595,361	5.8	...
Do 1850	193	275	...	...	...	...	...	...	...	1,566,318	12.4	1,047,290	17.5	1 in 1,810	549,019	4.3	1 in 8 or 10,000
Do 1860	300	335	...	147	...	663	...	535	...	1,225,163	4.4	712,089	...	1 in 1,331	513,074	...	1 in 8,500
Do 1870	330	479	...	328	123	1,135	66.4	809	51	1,512,565	23.5	880,858	23.7	1 in 1,669	631,707	23	1 in 1,937
Do 1880	402	604	248	578	61.4	1,832	61.4	1,354	55	1,635,980	9.5	1,020,122	15.7	1 in 1,813	635,868	6.7	1 in 1,100
Do 1890	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Do 1899	564	940	366	862	49	2,742	49	1,890	50	...	...	...	...	...	...	...	...

(a) Eastern State Hospital incorporated 1799, opened September 14, 1773.

(b) Western State Hospital incorporated 1826, opened 1823.

(c) Southwestern State Hospital incorporated November 29, 1884, opened May 17, 1887.

(d) Central State Hospital was incorporated —, opened December 17, 1899, as Howard's Grove Hospital, Richmond, Va.

In these statistics only the insane in the State hospitals are considered, but it is probable that the number of insane outside the hospitals of late has varied but little each year; as many perhaps are unprovided for to-day in the State as at any previous time.

The first two insane patients were admitted into the Eastern Hospital October 12, 1773, by the Court of Directors who met once a week for this purpose.

From this table it will be seen that in the early decades of this century, up to 1860 (the war between the States) the white population had increased a little over 100 per cent., while the colored population had increased about 75 per cent. At this time there were about 500 white insane in the hospitals and possibly not over 50 or 60 colored insane. In other words there were in 1860, prior to the said war, one white insane person to 1,810 white population, and one insane colored to about 8,000 or 10,000 colored population.

During this war the Old Commonwealth of Virginia was unfortunately dismembered and the State of West Virginia was separated from the Old Mother State. (I would fondly hope to see the day when the old landmarks were restored and the original boundaries re-established, but I fear hoping would be in vain.) This separation cut off from Virginia nearly one-third of her population and the percentage of increase in total population in this decade, counting both States, was much less, only about 4.4. At the end of the seventh decade (1870) we find one insane white to 1,331 of white population and one colored insane to 3,500 of colored population. During the eighth decade (1880) we find that the population, white and colored, had increased at about the same ratio, 23 per cent. or more, while the white insane had increased 51 per cent. and the colored insane 122 per cent. At this time there was one insane white to 1,089 of white population and one colored insane to 1,937 of colored population. During the ninth decade, or in 1890, we find that the white population had increased 15.7 per cent. while the colored population had increased only 6.7 per cent., and that the white insane had increased 55 per cent. and the colored insane about 77 per cent., or, in other words, in 1890 there was one white insane to 813 of white population and one colored insane to 1,100 of colored population. We regret that we cannot as yet have the

full returns of the tenth census decade, but up to 1899, the increase in the white and colored insane in the hospitals has been nearly the same ratio, about 50 per cent.

These statistics show for the last decades of the century, since the civil war, a remarkably increased ratio of insanity over and above the increase of population, both in the white and colored races; much more marked among the colored. This may be accounted for in part by the greater freedom of access to the State hospitals, the improved methods of management, and the gradual popularizing, so to speak, of these institutions; but other causes have contributed to this in a much greater degree.

While we cannot attempt to give at this time a detailed history of the management of the insane, and of the many noble men who have devoted their lives to this specialty in this State,—this has been done to a large extent by our distinguished Ex-President, Dr. T. O. Powell, in his address before this Association in 1897 in Baltimore, Md.,—it may be of interest to give the names of those who have been in charge of these State institutions from their establishment up to the present time.

The Eastern State Hospital from its opening in 1873 was in charge of keepers up to 1841, and visiting physicians only attended the patients when sent for by said keepers. The keepers were: James Galt, 1773 to 1801; succeeded by his son, William F. Galt, 1801 to 1826; Jessie Cole for a few months; Dickie Galt, 1826 to 1837; Henry Edloe, a few months; Philip Barziza, 1837 to 1841, when he was elected steward.

The visiting physicians were Dr. John Siqueyra, 1773 to 1795; Dr. John Galt and Dr. Barraud, 1795 to 1808; Dr. Alex. D. Galt, 1808 to 1841, when his son, Dr. John Mr. Galt, Jr., aged twenty-two, was made superintendent and held office until 1862. Thus the Galts, father, son, and grandson, all eminent physicians and philanthropists, were associated with the hospital from its foundation in 1773 up to the civil war in 1862. During the war, the Federal authorities took charge and Dr. Wager of the Fifth Pennsylvania was superintendent until the end of the war. Then Drs. Henly, Garrett and Petticolas were successively superintendents for short periods, succeeded by Dr. Brower, 1867 to 1875; Dr. Harvey Black, 1875 to 1882; Dr. Wise, 1882 to 1884; Dr. Moncure, 1884 to 1898; Dr. L. S. Foster, 1898 to present time.

It is worthy of note that this first institution for the insane on this continent was incorporated and established as a *hospital*.

The Western State Hospital for the first eight years of its existence, 1828 to 1836, seems to have been under the charge of a physician, Dr. Boys. In 1836, Dr. Francis F. Stribling, age twenty-two, was made visiting physician; Samuel Woodward was keeper and his wife matron; Dr. Stribling was afterwards made superintendent and had charge of the hospital until 1874; Dr. Robert T. Baldwin was superintendent from 1874 to 1879; Dr. A. M. Fauntleroy, 1880 (Jan.) to 1882; Dr. R. S. Hamilton, 1882 to 1884; Dr. A. M. Fauntleroy, 1884 to 1886; Dr. Daniel B. Conrad, 1886 to 22d April, 1889, when Dr. Benj. Blackford, the present worthy superintendent was elected.

The Central State Hospital was under charge of Dr. J. J. De Lamater from its organization, 1869 (as Howard's Grove Hospital) till June, 1870. Dr. Daniel B. Conrad, superintendent from July 1870 to September, 1873; Dr. Randolph Barksdale, superintendent from September, 1873 to March, 1882; Dr. David F. May, superintendent (under the Readjuster State Government) from March, 1882 to April 15, 1884, when Dr. Randolph Barksdale was reinstated as superintendent and held office until October, 1896. Dr. Wm. F. Drewry, superintendent from 1896 to present time.

In the Southwestern State Hospital, Dr. Harvey Black was superintendent from March, 1887, until his death in October, 1888. He had previously served on the committee appointed by the legislature for the selection of a site for this hospital, and had also been chairman of the building committee; Dr. R. J. Preston, superintendent from November 18, 1888, to present time.

Many of those who devoted their lives to this specialty have gone to their reward and time and space would fail me, even if could do justice to their memory.

When we compare the decades at the beginning and prior to the present century, when the characteristics of asylums in many places throughout the world, in the language of another, were "chains, darkness, solitude, and stripes, hideous cries and foul odors," with the present decade, "when so many of the appliances of health, comfort and pleasure characterize these institutions with their spacious mansions and handsome grounds with well ventilated, lighted and heated apartments with pure air

throughout the premises and wholesome food in abundant quantity, with the regular hours for recreation, food and rest; with the needful but mild restraint, where, added to these the stately trees, the smiling flowers, the splashing fountains, the shining grass, adorn the scene, arrest the eye, and distract the attention from the dismal present, and awaken hope; where the reading room with its voices from the outer world arouses sympathy with the animating pursuits of men, and stirs the love of pleasure and ambition; where music, too, the earliest remedial agent of insanity, with its voice of harmony to exercise the demon of madness; and last, but not least among these curative agencies, where the place of Divine worship allures to brighter worlds where sorrows cease." When we consider these things which science and humanity and Christianity have brought about, we can but wonder at the marvellous change.

"While Franklin spoke for humane treatment in 1750, and Pinel broke the chains from the insane in Paris 1792, and Tuke advocated non-restraint in England in the same year, and Rush of Philadelphia showed that insanity was not a curse but a disease, and required buildings specially devised for its care, with skilled physicians in charge," the Galts and Stribling and others in Virginia raised their voices in behalf of the "gentle treatment" and the abolition of harsh and cruel methods of restraint. These noble physicians and humanitarians were in advance of their age, and while they could not educate public sentiment up to this high standard in their day, they all did noble work for the cause of humanity and the cause of God, and have impressed their names and their influence indelibly upon psychiatry.

We would not in this partial history ignore or pass over the efforts and work of that noble woman, Miss Dorothea L. Dix, whose wonderful influence in ameliorating the condition of the insane was felt in Virginia and all over the South in bringing about these marvellous changes.

While all the State hospitals in Virginia are to-day endeavoring to keep abreast of these improved methods in the care and treatment of the insane, yet straitened finances necessitating lowered rates per capita have of late years restricted efforts along many of these lines of improvement. Many of the means and facilities for investigations and research into neuro- and psychopathology, enjoyed by many States, have as yet been unprovided in this State, or at least provided to a very limited extent.

SURGICAL OPERATIONS IN HOSPITALS FOR THE INSANE.

*By William Mabon, M. D.,
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It is not my intention in this paper to present any new theories regarding the treatment of insanity. It is rather my purpose to call attention to the abundance of opportunities which our hospitals for the insane offer for such surgical work as will promote the comfort and well-being of the patients.

The available literature concerning surgery for the direct or reflex relief of mental conditions is copious, and many of the cases reported are of extreme interest. It is a prudent caution, however, to bear in mind that those who undertake a special line of work, whether in medicine, surgery or any other science, are apt to become enthusiasts and to draw conclusions oftentimes from insufficient data.

The fact that the symptom group commonly classed under the general designation of insanity is after all a physical disease, makes it highly important for all physicians who treat mental alienations, to consider well the physical condition of their patients and to correct such physical defects as militate against their recovery or comfort. And such being the case, there is no more reason why conditions calling for surgical measures should not be examined into among the insane and the necessary relief given wherever indicated, than why pneumonia in an insane person should not be treated *secundum artem*. In a case of appendicitis the insanity of the subject does not preclude operative interference; then why should it in a case of ovarian cyst or a case of pyosalpinx? We maintain that both science and humanity demand the exercise of all the skill of the physician, not only in the direct treatment of mental disease, but also

in the relief of all associated bodily ailments; and hence we hold that the patient should have the benefit as well of such surgical measures as may be called for, as of the most careful medical examination and treatment.

In considering surgical operations in hospitals for the insane I do not wish to be understood as using this term synonymously with brain surgery; for in brain surgery the field is limited and, except in a few instances, but little is to be hoped for so far as mental recoveries are concerned. I rather make use of this term as embracing all surgical procedure which may add to the comfort of insane patients, whether it holds out much hope for their mental relief or not.

Now in treating of this subject I will simply endeavor to bear personal testimony to the results, sometimes unexpected, obtained by surgical measures in a hospital for the insane. And I will preface this short review of the surgical work performed at the St. Lawrence State Hospital by stating that the results have been made possible: (1st) By the liberality of the State in equipping our hospital buildings with special operating rooms; (2d) by the possession of trained physicians, many of whom have had general hospital opportunities and training in surgical technique; (3d) by the advantages which resulted from consultation with surgeons and specialists in the immediate vicinity of the hospital; and (4th) by the fact that the nurses now employed in State hospitals for the insane are carefully trained, not only in mental, but also in general nursing. Insane subjects are oftentimes disturbed and refractory; and therefore to fix a part and maintain proper dressings we have to resort to some form of surgical restraint, such as a protection sheet or camisole. Now it is in these very cases that a nurse specially trained in a hospital for the insane is of particular value; for while knowing how to properly manage a refractory patient, such a nurse also understands how to deal with the general problems of surgical nursing.

It is not unusual to find that insane patients, while convalescing from surgical operations, at times give evidence of mental improvement, going on in some cases even to complete recovery, and this in instances where the latter result could hardly be expected. Sometimes this outcome may be due to the shock of the operation; in other cases the mental effect which the opera-

tion itself produces in the subject, is to be credited with the mental improvement,—the explanation being that “we substitute a healthy for an unhealthy mental introspection;” while in still others the increased personal attention received after the operation together with the changed environment forms the medium through which mental improvement results.

Now, having prefaced so much, I shall go on to enumerate certain instances from my personal experience. And to begin with, a practical example of an unexpected but happy mental result following upon a surgical operation may be found in the case of a former patient of mine at the Utica State Hospital:

Case 1.—Woman; admitted to the institution on August 31, 1894; suffering from a second attack of acute melancholia of two months' duration, the ascribed cause being grief and worry. Shortly after admission it was found that she had a uterine fibroid which had been partially expelled from the uterus and was occupying a portion of the vaginal canal; her condition, therefore, naturally called for immediate relief. Almost directly after the removal of the fibroid the patient began to improve both mentally and physically, and within two-and-a-half months from the time of her admission she had regained her former health and was discharged recovered. Her previous attack of insanity had been of much longer duration, and improvement in that instance had only begun after a residence of several months in the hospital.

I may cite another instance, which has previously been reported by Babcock:

Case 2.—Man; admitted to the St. Lawrence State Hospital on August 21, 1896; suffering from acute mania of several weeks' duration; sailor by occupation; 43 years of age; had a defective family history; his father had been intemperate and died insane, and one sister had committed suicide; furthermore, the patient himself was intemperate and dissolute and had suffered from specific disease when 23 years old. His face and head were asymmetrical, and his right sterno-cleido-mastoid muscle was greatly contracted so as to entirely prevent rotation of the head to the right; in other respects his physical health was good; he had suffered from this condition of torticollis for twenty-five years, and for several months after his admission to the hospital he continued disturbed and delusional. Not quite four months

from the time of his admission an effort was made to correct his deformity; the right sterno-cleido-mastoid was divided near the point of its attachment to the clavicle and sternum; the head and shoulders were fixed in a plaster cast and jacket which were kept on for five weeks; then the stitches were removed and the wound dressed through fenestra. Following the operation, and as a result apparently of enforced rest, changed surroundings and good nursing, the patient's mental condition quite unexpectedly began to improve, so that by the time the cast was removed he had become quiet and orderly and had abandoned his delusions; this mental improvement continued steadily, and four months after the operation he was discharged from the hospital recovered. At the time of discharge his head, which had been at an angle of thirty degrees formerly, was within two or three degrees of the median line; and rotation to the right, which had been quite impossible, was nearly as easy as rotation to the left.

A glance at the hospital records for about three and a half years past shows that during that period no less than 189 operations have been performed. The commonest of these is the operation of lumbar puncture, as this alone has been performed 77 times. Paracentesis of the spinal dura was first employed in 1891 for the relief of hydrocephalus; later on it was suggested for trial in tubercular meningitis, and has since been advocated as of diagnostic importance in cases of tubercular and purulent meningitis.

So far as can be learned, the first lumbar puncture in this country in a case of general paresis was performed by Babcock at the St. Lawrence State Hospital in May, 1896. Since that time Dr. Babcock has operated upon many individuals, and he is convinced: (1st) That this operation affords temporary relief from pressure in more than 50 per cent. of the cases operated on; (2d) that ataxia is oftentimes relieved by it; and (3d) that the operation presents diagnostic possibilities. This procedure may also be of diagnostic aid in tabes dorsalis. The following case, which has previously been reported by Dr. Babcock, illustrates this point very well:

Case 3.—Man; 32 years of age; single; admitted to the hospital October 12, 1898; suffering from sub-acute mania of five months' duration. Eight months prior to admission he sustained

a Pott's fracture of the left leg, and while recovering from this fractured his right leg; when brought to the hospital he was on crutches and in a rather reduced physical condition. Ten years before he had contracted syphilis, which had never been treated; he had also been intemperate and given to venereal excesses. The initial examination disclosed complete reflex iridoplegia with loss of patellar reflexes. He seemed to have no lightning pains, and no sensory subjective symptoms common to tabes were present, excepting constant cephalalgia; nevertheless, as locomotor ataxia was suspected lumbar puncture was performed about two weeks after admission. Fluid was obtained to the amount of 90 cc., and twenty-four hours after the operation the subject complained of lightning pains, which later on became so severe as to call for medicinal relief; still later on his lower limbs became anæsthetic, while scattered areas of cutaneous anæsthesia were visible on the trunk; the headache disappeared after his first sleep; the pupillary and patellar reflexes were still non-responsive; bladder symptoms and attacks of gastric crises soon appeared. The immediate effect of the operation was to precipitate the patient from an ataxic to a paralytic condition, and this caused some anxiety; but he slowly regained the partial use of his extremities, and three weeks after the operation he was as comfortable as he had been prior to it, save that occasionally he felt lightning pains; at the present time he has all the cardinal symptoms of locomotor ataxia.

Not alone as a matter of interest, but also to indicate the wide field for surgical work which the State hospitals for the insane afford, I append the following list of operations performed at the St. Lawrence State Hospital:

Amputation of leg,	Paracentesis of pleura,
" toe,	" abdomen,
" finger,	Pterygium (removal),
" foot,	Removal of Fallopian tubes,
Celliotomy for peritonitis,	" ovary,
Cataract (removal),	" tonsils,
Deep lumbar abscess (opened, drained)	" cystic kidney (nephrectomy),
Dacryo-cystitis (sac removed),	" tubercular cervical glands,
Entero-anastomosis,	" osteo-sarcoma of face,
Exsection of sciatic nerve,	" uterine polypi,
Hemorrhoids (removal),	" lipoma,
Hydrocele (aspiration),	Resection of ribs,
" (removal of sac),	" vas deferens,

Hepatic abscess (opened and drained),	Resection of metacarpal bones,
Hernia (radical operation),	Strabismus (strabotomy),
Hipjoint abscess (opened, drained),	Skin grafting,
Hysterectomy,	Tuberculosis of knee (opened, drained)
Iridectomy,	Trephining,
Laparotomy for appendicitis,	Torticollis (radical operation)
“ (exploratory),	Varicocele (ligature),
Phimosis (circumcision).	Venesection.

Among these operations the following would seem to be of particular interest:

1. *Excision of Sciatic Nerve:*

Case 4.—In this case the terminal end of the sciatic nerve was involved in the cicatrix of an amputation stump, and the intense neuralgic pain in it called vigorously for operation. Two inches of the nerve were removed, therefore, about eight inches above the stump, and with excellent results, as the pain ceased entirely.

II. *Radical Operations for Hernia:* These operations were always performed with the dominant idea of promoting the comfort and usefulness of the subject. Twenty-four patients in all have undergone this operation; of these one suffered from femoral, two from direct inguinal, and the remaining twenty-one from inguinal hernia. Several of the indirect inguinal hernias were double, and the usual percentage of congenital hernias was found. In one instance the sac contained an enormous amount of omentum and an undescended testicle. A physical examination of as many of the twenty-four subjects as still remain in the hospital, shows that only two of these have relapsed since the operation; on the other hand several patients who before surgical treatment had been physically incapacitated for manual labor, have since become good workers, and are far happier for being occupied than they formerly had been. The results obtained in some of these cases seem worthy of being recorded:

Case 5.—Man; 24 years of age; single; by occupation laborer, was admitted to the hospital on January 15, 1898, suffering from melancholia; his depression was tinged with marked hypochondria, referable to a double inguinal hernia and imaginary varicoceles; after his admission he improved slowly, the depression disappeared, but the hypochondria remained unchanged. Six months after admission Bassini's operation for radical cure was

performed; the convalescence was uneventful; from that time on the patient did not refer to his supposed sexual weakness or imaginary varicoceles; he continued steadily to improve, and on April 26, 1899, was discharged recovered. In this instance the mental depression responded to the usual treatment; but the hypochondria remained until the operation, and it was apparently as a result of the operation that it eventually disappeared.

Case 6.—Man; 48 years of age; by occupation, laborer; was admitted to the hospital on April 7, 1899, suffering from agitated melancholia. At the time of admission many of his delusions centered about a double inguinal hernia of moderate size; thus he thought that this hernia prevented his bowels from moving, that the contents of his abdomen were gradually dropping out, and that all this would soon result in his death. As soon as the man's general health had been built up, an operation was performed for the radical cure of his hernia, and with very happy results. Convalescence from the operation was rapid; the subject became brighter, was less depressed, and at the end of a month was up and about the ward, free from agitation and delusions referable to his hernias; he has made still further mental improvement since then; this patient is still under treatment, and he has a fair chance of ultimate recovery.

I will next subjoin two instances in which patients who had been very noisy and untidy, became, through surgical treatment, quiet, neat and industrious.

Case 7.—Man; 55 years of age; suffering from terminal dementia of long standing; was restless, untidy, idle and even somewhat destructive. Operation for hernia was performed three years ago, and soon after he began to improve in habits. He grew to be quiet, industrious and trustworthy to such an extent that he could be granted parole of the hospital grounds; on fine days he works out of doors, and he has such a measure of comfort afforded him as was quite unattainable before the operation was performed.

Case 8.—Man; 50 years of age; suffering from terminal dementia of several years' duration. He was dull, full of delusions, untidy, irritable and inclined to make unprovoked assaults; was operated upon three years ago for the cure of a large left inguinal hernia and shortly after the operation became quiet and agreea-

ble, and asked to be set at work. He has been given employment in the laundry, and is quite industrious and happy.

III. *Resection of Vas Deferens*: The following case very well illustrates the fact that a physical infirmity will sometimes produce an acute psychosis by causing loss of sleep, and that on the other hand the removal of the pathological condition will result in recovery from the psychosis.

Case 9.—Man; 65 years of age; by occupation, farmer; was admitted to the hospital on February 18, 1899, suffering from acute insanity of a maniacal type. The man's physical health was feeble, and aggravated cystitis due to prostatic hypertrophy and causing a marked loss of sleep, made the case a more complicated one. This trouble was treated at first with the usual remedies, and by irrigation, but without benefit to either cystitis or mental condition; the patient's bladder was so irritable that he had to rise from twelve to eighteen times each night, and as this prevented him from obtaining sufficient sleep, it undoubtedly added much to his mental disturbance. It was four weeks after his admission to the hospital that the operation was performed. Both the right and left vas deferens were resected in the hope that the prostatic trouble might be alleviated. The operation was quite successful, for in a month's time the prostrate had diminished nearly one-half in size. During this time the bladder was carefully irrigated, and the patient had but little difficulty in completely emptying it, having to rise only twice each night. As soon as he was able to obtain a reasonable amount of sleep mental improvement began, and this continued steadily until the summer of 1899, when he was discharged from the hospital completely cured.

IV. *Trephining*: This procedure is not often available for the relief of insanity. There are a few instances, however, where the morbid mental condition may be traced to trauma, abscess, tumor, or other gross pathological conditions; and in these instances the advisability of trephining may be considered. In the case appended a good recovery resulted from the operation:

Case 10.—Man; 38 years of age; by occupation, bookkeeper; was admitted to the institution on September 6, 1896. He was suffering from melancholia of several months' duration, which was said to be due to overwork; and in addition he had localized

chorea, which resulted according to his physician from cortical apoplexy. This was limited to the left hand and foot, and disagreeable subjective paræsthetic symptoms accompanied it. While the patient was awake the movements were constant, and they were only partially under the control of his will. They had antedated his insanity by as much as three or four years. At the time of his admission to the hospital the man's physical health was fair, but his melancholia was accompanied with hypochondria and some neurasthenia; he also had a double inguinal hernia, while he occasionally suffered from mental confusion, lapses of memory, headache and persistent insomnia. Soon after his admission an operation was performed for the radical cure of the hernia. As a result of the relief obtained from this operation, hypochondria disappeared and his mental improvement was such as to warrant his return home on parole. He remained at home, however, only two months, as the improvement did not continue; and six months after the operation for hernia he was trephined over the motor area on the right side; strong bands of adhesion were found uniting the dura mater to the pia along the upper two-thirds of the fissure of Rolando. These fibrous bands were divided as far as the longitudinal sinus; and the patient made a good recovery from the operation; for a few days after the trephining slight movements of the hand and foot were noticeable; but, with the exception of occasional twitchings of the toes of the left foot, these soon disappeared; the patient's mental condition was markedly benefited by the operation, and in September, 1898, he was discharged from the hospital completely recovered; he has remained well up to this time.

In the surgical procedure next to be described, sensory phenomena formed a guide to the localization of a lesion, and the operation resulted in modifying the symptoms. The case was reported by Blumer in 1893.

Case 11.—Woman; 60 years of age; admitted to the Utica State Hospital on November 2, 1891, suffering from melancholia of six months' duration. Three years prior to her admission she struck her head on the iron portion of a bedstead, lost consciousness, and was ill for a week or so afterwards. No subsequent bad effects were visible; she apparently recovered from the injury and was in her usual health until the spring of 1891, when mental changes were first noticed. At that time she

began to imagine that her neighbors were speaking ill of her, thought that people were trying to poison her by throwing dust in her face, heard imaginary voices which she sometimes answered, and finally wandered away from home in order to escape her tormentors. After her admission to the hospital an examination revealed the fact that there was a marked depression in the skull over the ascending parietal convolution in the sensory area for the left leg. She complained at the time of perverted sensations in the left lower extremity, feeling as though she were being burned and cut and pricked with pins. On the 5th of November the operation of trephining was performed. The buttons of bone removed, were very thin over the site of the injury, consisting only of a lamina of cancellous tissue; but there was no evidence of fracture of the skull or of consequent pressure. The dura mater appeared quite normal, and nothing indicated that it ought to be incised. It was the opinion of those present that, if the symptoms of irritation should not subside with the removal of the bone, the wound might afterwards be reopened; and then the membrane could be incised and the cortex examined. The subject had an uninterrupted recovery from the operation. So far as mental symptoms were concerned there seemed to be no improvement; but the manifestations of irritation in the sensory centre for the left leg had subsided, and the patient had ceased to complain of being burned, cut and pricked with pins. In fact, for three years after the operation, when I lost track of the case, she presented no further symptoms of cortical irritation.

V. *Pelvic Surgery*: There has always been more or less dispute as to the benefits to be derived from pelvic surgery among the insane; but it cannot be gainsaid that good results have at times been obtained from it. The great trouble has been the desire on the part of some to operate in all cases, without carefully considering the relationship between cause and effect. In reference to this matter I cannot do better than quote Skene, whose large experience entitles his views to serious considerations. In a paper on "Relations of Disease of the Sexual Organs to Insanity and Nervous Disorders," which he read before the American Medico-Psychological Association in 1892, he goes into this subject very fully.

"Diseases of the sexual organs in women," says Skene, "while

they give rise to a great variety of nervous disturbances, do not by any means cause insanity so often as gynecologists have believed and taught in their writings. Diseases of these organs rarely cause insanity, comparatively speaking, unless there is a predisposition to insanity. This is evident when we consider that there are so many cases of disease of the sexual organs and consequently of nervous affections among women, compared with the number of cases of insanity among the same sex; and the fact that the cases of insanity among women who are known to have had or do have some uterine or ovarian disease, have in a great majority of instances a neurotic history which shows a predisposition to insanity."

This statement of Dr. Skene conforms very largely with the views held by most conservative surgeons and alienists. Therefore, in operating upon the pelvic organs of women suffering from insanity, the central thought should not be that the operation is going *per se* to bring about a mental recovery, but rather that the general health of our patients will be improved by the removal of pathological conditions; and also that insane persons are as fully entitled to the advantages held out by surgery, as are the sane.

I will describe only two of the cases of pelvic surgery at the St. Lawrence State Hospital.

Case 12.—Woman; married; 30 years of age; was admitted on the 10th of February, 1897, and had a defective family history, since two aunts of hers and two uncles had been insane. She was suffering from melancholia of about a year's duration. Previous to her admission she had three times attempted suicide. She had killed one of her children and cut the throats of two others, who, however, did not die; and when admitted to the hospital she was despondent, agitated and restless. A physical examination revealed a tumor in the abdomen, connected with the right ovary. Two months after admission this was removed and was found to be a dermoid cyst. The left ovary was cystic, and was also removed. Convalescence from the operation was rapid. Within two weeks the patient had grown to be less depressed; and one month later she had gained in weight, was exercising better self-control and was far more cheerful. She continued to improve steadily, and by the first of July was practically recovered. However, in view of her family history, we

kept her under observation for another month, when she was paroled for thirty days, and at the end of that period discharged as recovered.

The other case, so far as mental recovery is concerned, was not so fortunate; nevertheless it is a case of some interest, since the patient's physical condition was greatly improved by pelvic surgery and it was made possible for her to take more interest and comfort in life than she had formerly taken.

Case 13:—Woman; 50 years of age; affected with chronic melancholia of four years' duration. She had fixed delusions and at times manifested suicidal tendencies. She had a chronic vaginal discharge, which was found to contain gonococci; and she was subject to attacks of pelvic pain and distress, which required her to spend nearly half of her time in bed. An exploratory operation was thought advisable, and when this was resorted to, it was found that the left tube and ovary were thickened and in a state of chronic inflammation. They were therefore removed. The patient recovered from the operation; and she has had no return of pelvic pain, although three months have elapsed since the removal of the organs.

In both the above cases the diseased condition of the ovaries and tubes was well-defined, and operative assistance was strictly demanded.

We not wish to be understood as advocating the removal of healthy organs for the possible relief of the so-called reflex psychoses. It is very well known that the removal of healthy ovaries in those under the age of 38, produces a premature menopause, with greater depressing effect upon the body and mind than would result from this physiological crisis coming on at the natural time and in the natural way. But when these organs are diseased to such an extent that their function is modified or destroyed, then so great a depressing influence upon either the general or the nervous system, does not follow their removal. Skene says, that "the slow destructive action of the ovaries prepares the organization, as it were, for the menopause, and at the same time occupies the nervous system with the disturbances which come from diseased ovaries, and hence their removal is a relief to the nervous system; whereas the removal of the normal ovaries is, figuratively speaking, an

outrage to the nervous system which often overwhelms it." This statement needs no comment.

VI. *Resection of Ribs for Empyema*: The following case would seem to show that this operation is sometimes productive of mental relief:

Case 14:—Man; 28 years of age; single; by occupation a laborer; admitted to the hospital suffering from acute mania complicated by chronic pleurisy and empyema. There was a sinus leading from the cavity of the right pleura. This closed up soon after admission, and the patient began to fail physically. Examination showed that pus was accumulating in the pleura. So part of the seventh rib was resected, and the pleural cavity was thoroughly irrigated and drained. The patient at once began to improve both physically and mentally. The mental improvement was uninterrupted, although his physical improvement was slow and tedious, extending over a period of several months. Ultimately he was discharged recovered. In this case, mental improvement was co-incident with the building up of lowered physical vitality.

In concluding, we would emphasize the fact that mere medical and moral treatment does not meet all the requirements of psychiatric practice; and that therefore we should leave no stone unturned in endeavoring to treat our cases individually, according to their several needs.

A large number of our patients come from the country, and many of them from the poorer classes of society. Some of them have never had the opportunity for an operation which might relieve them from prolonged distress and suffering. Surgical diseases, existing in those predisposed by heredity to insanity and causing them general ill-health, are also in a number of cases undoubted causal factors of the insanity itself, and should be so recognized. In many instances, unfortunately, local disease has existed too long for the possibility of mental recovery by surgery; but even in these cases it becomes our duty to relieve the associated disease, trying at the same time to place the patient in as comfortable a mental state as possible. At the St. Lawrence State Hospital the results of our work along the lines laid down in this paper have been entirely satisfactory from the surgeon's standpoint; while we enjoy the gratification,

in addition, of knowing that in a number of cases mental recovery was directly aided by this course of action.

DISCUSSION.

Dr. EVANS: There is only one point in this paper that I want to give a little attention, and that is the operation of ovariectomy or the removal of the uterine appendages for the relief of insanity. I realize that what I am about to say is based practically upon one isolated case, and that does not prove very much in medicine or surgery. Nevertheless, I will give you that one case. We hear a great deal said about the crime of operating when there is no pathological condition in the ovaries or appendages. In other words, that it is practically criminal to remove a physiological ovary. I was associated with and on the staff with Dr. George H. Rohé, now deceased, whose work along this line you know. I first went into service with Dr. Gundry whose work you all know, and who has long since passed away. My attention was first called to a woman who had been in the institution four years or more. She was in one of her excited periods, showing a tendency to destroy everything. It was evident that she would soon destroy the whole ward. So I went to the superintendent and said that Mary Hawkins was tearing up things on No. 6, and asked what I should do with her. He said, "I have prescribed for her for some time. Your predecessors have looked after her for a number of years and we have done her no good, so you may do what you like and I think you will do her no harm." For four years I prescribed all sorts of treatment. I admit frankly that I gave her medicines for the use of which I could see no reason. She was strong and active. After giving her medicine such as would deplete her, I gave her cardiac depressants and such things as the bromides in the form of bromidia, which we put up ourselves, and I sweated her with pilocarpine, and vomited and tonicized her and gave her all the various forms of purgative medicines that are permitted in the pharmacopœia. It may seem strange to you, but I tried to keep within the bounds of the law. I put her upon tonics, although any of us would probably be proud to have as strong a body as she apparently had. Nevertheless I put her upon cod liver oil and the hypophosphites. She was excited, as a rule, in the menstrual periods; in the interval she was usually apparently sane. During the menstrual period she would become excited, have hallucinations of sight, saw the devil in the form of various hideous animals in her room, and would destroy everything and everybody within her reach. In view of that fact I thought if I could terminate a normal physiological function which acted apparently as an exciting cause of a mental derangement, it was not beyond the range of my duty as a physician to do so. So we gave her an anæsthetic and put her on the table and I proceeded to do the operation. With the assistance of Dr. Rohé we did what we thought satisfactory work and she got well. She had then been under treatment eight years and nothing, whether done intelligently or promiscuously, had done any good. Within four months after the operation she was able to go out and earn her own living, and the doctor tells me she is still doing well. Her ovaries were perfectly physiological; I never saw any

better ones in my life in any operation. There was no evidence of any abdominal disease whatever, and she appeared to be perfect as a subject for the demonstration of physiology. I have seen scores of cases where there were abscesses and adhesions and diseased tubes and pus cavities, where no good was done to the mind, but here was a woman whose delicate mental poise was such that any little excitement would upset her and the removal of the apparently physiological appendages produced a perfect cure and the woman is now out, a bread earner and no longer a tax upon the State. And so when I hear people talk about the criminality of this operation and declare that they must find some little pimple or something to justify the operation, I think they either lack strength or they make these statements for statistical purposes. If there is any likelihood of the removal of the appendages benefitting the physical and mental condition of the patient, especially where other remedies have been tried faithfully without advantage, I think the operation is justifiable.

Dr. MANTON: I just wish to express my appreciation of the doctor's paper and to say how delightful it is to see the pendulum swinging in the right direction. I am glad to hear these statements from an alienist. This is a subject which it would take a very long time to discuss satisfactorily, but I do want to say that it is a great pleasure to me to know that this Association is beginning to indorse the views which I published as long as ten or twelve years ago.

A CLINICAL CASE.

*By A. R. Moulton, M. D.,
Philadelphia, Pa.*

The subject of this paper is a young man, nineteen years of age, a native of a Southern city. He was a very puny child, and until he was over a year old it was thought he would never be reared. He has always been delicate, and has had a weak and irritable stomach, but he never had any severe disease. When about six years of age he fell and received a fracture of the skull just over the outer third of the left orbit, which was not recognized, though he received prompt surgical attention. He was not rendered unconscious, and the wound promptly healed. A year later it was noticed that the scar on his forehead was becoming more apparent. By 1893, five years later, a depression in the skull could be plainly made out. When put to school in 1888 he began to have headaches which were attributed to his too active mind, as he was always very bright mentally, and he has since suffered more or less from supra-orbital pain. When twelve years of age it was found that he had astigmatism, and he was ordered to wear glasses. This relieved his headaches a little. His physician, in 1890, when the boy was fifteen years of age, advised that he be placed at school in a colder climate, and he was sent to Virginia in September of that year, where he studied hard (against the wish of his father and teachers) and suffered constantly from headaches. When he returned home in June, 1897, the depression in his forehead was very noticeable, but his general health was much better. He had grown and seemed a good deal stronger. At this time he first began kleptomaniac practices, at first denying all knowledge of the missing articles, but when the evidence was conclusive he would admit the theft, but claimed he "could not help taking

them." He was reasoned with, appealed to, punished and it was supposed (mistakenly as the event proved) his delinquency had ceased. Yellow fever being prevalent in his city, in September, 1897, he was sent to relatives in Chicago where he continued his kleptomaniac acts, taking various articles from the house and pawning them. He also told untruths and practiced deceptions of various kinds.

He explained at the time that when the feeling came over him to take things, he "had got to have them," that "he could not resist," and also that he had "*shivers*," preceded for a few seconds by a feeling as though things in the room were revolving, first slowly, then faster and faster, and then the "*shivers*." He said these attacks occurred quite frequently. He never lost control of his bladder, but his family servant said she had many times noticed that his pillow was stained, especially just before his being sent away to school, and after his return (previous to September, 1896, and after June, 1897). His friends have often noticed sudden blanching of the face, followed by blotches on his face, but attended by no tremor or muscular twitchings.

In Chicago in the fall of '97 he was seen by a surgeon and by a neurologist. They gave the opinion, it is said, that the boy's condition was one of epilepsy, and "that an operation should be done to explore the cranium and the frontal brain." They also gave the opinion, it is said, that as a slight depression had been detected at the top of his head, that, too, should be surgically investigated. On January 12, 1898, Dr. Ernest Laplace operated in Philadelphia on the vertex of the skull, as well as over the left eyebrow. Above he found a rounded depression pressing upon the brain, but making no indentation thereon. This extended over an area one and one-half inches in diameter. The bone was entirely removed. Over the eye he found depressed bone that had made an indentation in the brain. The dura was intensely adherent to the depressed fragment. There were in the brain substance spiculæ of bone which were removed and the brain freed. The boy recovered from the operation without a bad symptom, and left the hospital on February 9, 1898, his general physical condition and moral nature being greatly improved, so the doctor thought.

On March 10th, he began a special course at an academic institution, and soon resumed cigarette smoking, but deceiving his

father relative to the same. There has been no kleptomania (in the usual sense) since the operation, but a new phase of moral lapse developed itself in about six months, in borrowing money from his boy friends.

In January, 1899, he ran off, taking no clothes or toilet articles with him. In ten days he telegraphed his father from a small town within fifteen miles of his home to send him a railroad ticket, as he wanted to return. When he reached home he was in a terrible condition from exposure. He had been trying to get work, and had pawned his coat for two dollars. He said he could not resist the desire to go away. He was then put to work in the office of a friend, and within a month took two dollars in revenue stamps from the drawer and sold them for fifty cents, but at once told his employer and handed him the fifty cents.

For a few months all went well, except that he contracted debts and borrowed money. He would be most repentant, but weak beyond expression, apparently wanting to do right, but unable to do so. In February, 1899, he ran off again, taking nothing with him. This time he got money by buying a suit of clothes, having the same charged to his father, and without unwrapping the bundle, selling them to a second-hand dealer for ten per cent. of their cost, and borrowing ten dollars each from two of his father's friends on the ground of his father's absence, and of his own sickness, and of his unwillingness to tell his aunt. His folks learned of his whereabouts by his drawing on his father for two fifteen-dollar drafts through his father's agents. He was sent for, but had left. The next morning he telegraphed his cousin to meet him at the cemetery, where he was found unconscious, from chloroform, on his grand-mother's grave. Once more, "he could not help it."

He was then taken to a private reformatory school, which to use his father's language, "turned out to be a hell on earth." He interposed no objections, even went cheerfully for he "was going to show how he could reform himself and insure his future." He was afterwards put in a military school in North Carolina, where at first all went well; then he was sick from repeated fainting attacks, all brought on, so the superintendent informs me, by over-eating, and over-fatigue; then his eyes were out of order; then his teeth needed attention—all of which

led to a greater degree of latitude being allowed him than the other cadets. He commenced to contract bills, and this in turn began to weigh on his mind. He drew on his father for money to come home, but on the contrary went North. For ten days the police and detectives of the country were on the lookout for him. He would be known to be in a certain city because of some draft on his father cashed by some friend. So it kept on until he was located in New York. He was glad to see his father, though he expected to be returned to the school, and said he was tired of wandering.

He was then, January 9, 1900, received at the Pennsylvania Hospital for the Insane, where he now remains. Upon admission he was pale and haggard, his circulation was poor, and he weighed one hundred and twenty pounds. He was placed upon tonics, a regime of physical exercise and reading laid out, and medical baths and massage prescribed. Under this treatment there has been much improvement in his physical condition; his muscles are hard; his eyes are clear; he is alert and vigorous and weighs one hundred and thirty-five pounds; his blood count is now 4,400,000, with 68 per cent. hæmoglobin—a decided gain over that which obtained when admitted.

While at the hospital he has had one fainting attack, but he did not fall to the ground, nor did he change color, or show any mental confusion; this followed too violent exercise in playing ball. He has complained considerably of headache, which has appeared suddenly, and as suddenly subsided, sometimes after the administration of remedies—sometimes when a placebo was given. He has been seen by an oculist, who reports that he has far-sighted astigmatism, but no change in his fundi indicative of any systemic derangement. When he wears glasses he complains of little headache.

After getting acquainted with his companions and attendants this boy began to tell many untruths, and he wrote to his relatives accounts of what he said occurred at the hospitals, that had not a particle of truth in them; but latterly he has been more truthful, and does not seem nearly so inclined to deceive; indeed, with improved nutrition and the pursuance of a healthy regime, he is apparently forming habits which it is hoped will become so fixed that he will yet retrieve himself. This record

would be more complete if something were said of this boy's ancestry, and I proceed to give a brief account of it:

His paternal great grandmother was a martyr to sick headaches. His paternal grandmother had sick headaches twice a week until her marriage. His paternal great-uncle suffered from headache all his life. All his paternal great-aunts and uncles have had headaches. His father is very nervous, and until five years ago, from twenty-one years of age, rarely went two weeks without headaches. His only paternal uncle is neurasthenic, and has suffered from headaches all his life. His paternal great-grandmother had a stroke of paralysis at the age of fifty, and died from the effects of it seven years later, never recovering the power of speech. *Her* eldest son had a stroke of paralysis at the age of forty-eight, never recovering the use of his limbs, and died of cerebral congestion two years afterward.

On the Maternal Side: His grandfather had a stroke of paralysis at the age of fifty-nine, never regained consciousness, and died six weeks later. His mother, who contracted the opium habit after his birth, was seized with convulsions at the age of thirty-four and died in thirty-six hours, having had twenty-nine convulsions. Her convulsions were attributed to uremia. She was two months pregnant. Two of his maternal aunts, aged respectively thirty-nine and thirty-eight, had Bright's disease and died in convulsions. Another maternal aunt died from apoplexy, aged thirty-seven. She had been under treatment for Bright's disease for one year. Another aunt has had convulsions. A paternal great-aunt was insane many years before her death (caused by shock while in child-bed). His paternal uncle had terrible night terrors until eight years of age. *His* only child (cousin of the patient) has night-mare, during which she screams. She has no remembrance of the condition in the morning.*

DISCUSSION.

Dr. BRUSH: I think we are under many obligations to the doctor for having given us the history of the case. He is to be congratulated upon obtaining so good a family history as he seems to have done. It is the experience of many of us that when we look into the etiology of a case which we cannot explain except possibly by heredity, we are told there is no heredity and that there never has been anything of the kind in the family. But upon

*This patient continued to improve, and on September 28, 1900, he was discharged and returned alone to his home.

asking questions cautiously we find that statements made to us are not strictly correct. I cannot exactly agree with the doctor. I think as long as his patient is surrounded with watchful care and is subject to the routine care of the hospital he will get along very comfortably and possibly will be able to leave the hospital for a time, but I doubt very much the patient not relapsing into a similar condition. I have in mind a sister of the case he has reported, as far as the symptoms are concerned, although I do not know that they are related. She has improved and done very well for a year or two, and then some little thing would occur and she would go back to her old habits of lying and deception and everything else, and I am afraid that will be the history of the doctor's case.

Dr. DREW: I am very much interested in the doctor's paper. It seems to me he has well described a type of cases which we receive at the Massachusetts Asylum for Insane Criminals from the Massachusetts Reformatory. We receive a large number of patients from that institution. A large percentage of these are looked upon as cases of congenital deficiency or imbeciles, and there are many in the reformatory with a lesser degree of deficiency who do not come to us. The case Dr. Moulton has described represents a type which makes up a large percentage of the cases received from the Massachusetts Reformatory and also probably represents a considerable percentage of the inmates of the reformatories of other States. It is unquestionably true that under institutional ways these cases improve, and, as their nutrition improves their self-control will be better. But, as the doctor says, I very much fear that after the patient gets out from under his control he will be unable to resist the strain and temptations of ordinary life and probably will relapse in a very few years, at the most, after leaving the institution.

Dr. MOULTON: I merely remarked in my paper that it was hoped the young man would retrieve himself, although I fear he will not. I am, however, more convinced now than I was when I read a paper a few years ago, before this Society, on the relation between bodily weight and mental improvement, that when you put these patients under the best conditions, improve their digestion, get them to assimilate food and put on fat, you have done something for them that may stand by them for a good many years, provided they keep up their nutrition. In this case it is a fact that the boy has always been thin and haggard. He now complains that his clothing does not fit him, that his trousers have become so tight he cannot get them around him. A great many patients in our hospitals could be benefited and their conduct changed and improved if they were better fed. Fat patients generally are a pretty quiet and orderly class of patients, while this cannot be said of all the lean ones, although some of them are good patients. We all know, who have had experience in this matter, that the criminal and vicious and bad people are as a rule under-fed. In order to correct these tendencies and to tend to make better citizens of them, I believe it is necessary to improve their nutrition.

EPILEPSY IN THE INSANE.

*By Isham G. Harris, M. D.,
Poughkeepsie, N. Y.*

From October 1, 1888, to September 30, 1899, there have been treated in the State hospitals of New York, 53,340 insane patients. Of this number 1,890 have had epilepsy associated with insanity. This is about one insane epileptic to every twenty-eight of the insane population, or a little over 3.5%. In 1888, Dr. Baker of the Broadmoor Asylum, stated that there had been admitted 2,000 patients to the Sommerset Asylum for the Insane and of this number 11.1% were epileptic—the male being 12.1%, and the female 10.1%. Dr. McPherson in his recent book on “Mental Diseases” states that about 9% of the insane population of England is epileptic, and Dr. Allbutt makes a similar statement in his “System of Medicine.” The Asylum of New South Wales reports that the epileptic insane amounts to about 8% in that country. The report of the Westmoreland (and Cumberland) Asylum for the Insane states that for a period of thirty years the epileptics of that institution amount to 4.7% of the insane. The epileptics in the Hudson River State Hospital, at the present writing, amount to 4.7% of the insane.

The proportion of epileptics to the general population seems to vary for different States and countries. It has been estimated that in this State (New York) there is one epileptic to every 500 of the people. In New South Wales there is one to every 367 persons. Germany estimates that there is one to every 1,000 of the population in that country. The general consensus of opinion among the best writers is that there is one epileptic to every 500 or 600 of the general population.

According to Dr. Petersen about 10% of the epileptics of this State are insane. Dr. McPherson in his recent book on “Men-

tal Diseases" states that about 50% of all epileptics become insane. In 1879, Dr. Echeverria reported that out of 783 epileptics under his care, 267 or about 35% were insane. In the Asylum for Epileptics at Wuhlgarten, Germany, a special department for the "restless, maniacal and dangerous" was built to accommodate 120 out of 500. This would be 24%. Of the 5,028 epileptics admitted to Bethel Colony only 25% were without any perceptible mental disease; 33% had only slight defects of the mind; 17% were classed as mentally disturbed and 25% as imbecile. By taking the average of the above five statements, we get something over 27% as the proportion of epileptics who are mentally defective or insane. It must be admitted that this is a very hard question to determine, from the fact that many epileptics who are mentally defective never come to an asylum and are cared for at home.

The mortality among the epileptic insane appears to be very great. Of the 1,890 admitted to the State hospitals of this State during a period of 11 years, 793 have died. This is over 41% or almost 1.5% of the total number of patients treated in the hospitals for the insane. The 49th report of the English Commissioner in 1895 states that there were 5,927 deaths in the English institutions for that year and that 6.2% of them were due to epilepsy. In 1885 the Rubery Hill Asylum reported 61 deaths, 28 or 45% of which were due to epilepsy. Dr. Echeverria states that 195 children out of 553 died of convulsions. (This statement is not very relevant here as we have been speaking of the mortality of insane epileptics in asylums, and yet it goes to show the great death rate among the convulsive diseases.) In the Ohio State Asylum for Epileptics there has been admitted since its opening 1,295 patients. Of this number 108 or a little over 8% have died. Craig Colony for Epileptics of New York shows a still lower death rate amongst its population, it being 26 or 5.7% out of 455. However it is hardly proper to consider the death rate of these two colonies from the fact that they do not admit any of the insane epileptics. Besides it appears to be the aim and object of the management of each institution to admit only those who may be teachable and capable of being benefited by such advantages as may be derived from a colony life.

Heredity is said to be one of the most potent factors in the predisposition to epilepsy and its allied neuroses. Dr. Knight of

the Connecticut School for Imbeciles found epilepsy to exist in over 60% of the cases examined by him. Of the 1,295 patients admitted to the Ohio Hospital for Epileptics from 1893 to 1898, 18% had relatives who were epileptic and 8% who were subject to insanity—a total hereditary tendency of 26%. In 1880, Dr. Echeverria gave the results of an investigation made by himself. In 136 married epileptics who begot 553 children, only 19% were healthy. Of the 553 children 195 died of convulsions during infancy and 78 were epileptic and living. Here we have a convulsive neurosis transmitted without change of type, of 49.7%. In another series of cases numbering 572, the same writer found a hereditary taint transmitted directly from the parents in 39.3%, while in 111 other cases he could trace heredity in only 25%. Aside from heredity, intemperance plays a great part in the cause of epilepsy. Dr. Henry Clarke, of England, on "Heredity and Crime in Epileptic Criminals," found "direct heredity of fits, insanity, drink and crime in 64.9%" of his cases. Dr. Echeverria's 572 cases show that parental intemperance originated the predisposition to epilepsy in 17.3%. Parental intemperance associated with epilepsy or insanity existed in 17.5%, while parental epilepsy itself existed in 15.7%. Leaving out the transmission of epileptic tendencies from intemperance we have hereditary predisposition from parents in 36.5%.

In the 76 cases that have come under my immediate observation parental intemperance was found in 17.1%—15.78% being on the father's side and only 1.32% on the mother's side. Insanity on the father's side was 3.95%, while it was 6.57% on the mother's—a total of 10.52%. Epilepsy was traced in only 2.6% in the parents. Apoplectic paralysis was found in 13.1% of the parents. If we add these different percentages we get a grand total of 43.3% of fathers and mothers who had epilepsy, insanity, were intemperate or had paralysis. Here it will be interesting to notice from what other diseases the parents and collateral relations suffered. Rheumatism is standing foremost, (15%); then heart disease and phthisis seem to have equal rank, 11%.

In tracing hereditary histories it will be found that from 4% to 5% of the cases are congenital imbeciles or idiots without epilepsy. And here it may be interesting to remark that the great mortality among epileptic children explains why so many writers, when examining adult epileptics, so rarely find hereditary

predisposition to the disease in question. The proportion of epileptics who survive adolescence amounts to about 14% in Dr. Echeverria's table. The French and English writers admit 12% to 13%.

Heredity—Table 1.

	<i>Males.</i>	<i>Females.</i>	<i>Total.</i>
Had intemperate father	4	8	12
“ “ mother	1	0	1
“ insane father	3	0	3
“ “ mother	2	3	5
“ “ grandfather	3	2	5
“ “ grandmother	2	2	4
“ “ brother	2	1	3
“ “ sister	0	1	1
“ “ uncle	2	5	7
“ “ aunt	2	2	4
“ epileptic father	0	1	1
“ “ mother	1	0	1
“ “ grandfather	1	1	2
“ “ brother	1	4	5
“ “ sister	2	1	3
“ “ uncle	2	2	4
“ “ aunt	4	0	4
“ paralytic father	1	3	4
“ “ mother	3	3	6
“ “ grandfather	1	2	3
“ “ grandmother	2	0	2
“ “ uncle	0	2	2
“ rheumatic father	6	2	8
“ “ mother	1	1	2
“ “ grandfather	0	1	1
“ “ grandmother	0	1	1
“ phthisical father	2	2	4
“ “ mother	0	1	1
“ “ grandfather	0	1	1
“ “ grandmother	1	1	2
“ “ sister	0	1	1
“ heart disease, father	1	1	2
“ “ “ mother	1	4	5
“ “ “ grandmother	1	0	1
“ “ “ sister	0	1	1
“ chorea, mother	1	0	1
“ sunstroke “	0	1	1
“ hydrocephalic brother	1	0	1
“ imbecile brother	1	0	1
“ spinal disease, brother	0	1	1
“ cancer, father	1	0	1
“ “ mother	0	1	1
“ diabetic father	0	1	1

In an analysis of the 76 cases that have come under my care, let us first glance at the nativity of the parents.

Table II.

	FEMALES.		MALES.		Total.
	Fathers.	Mothers.	Fathers.	Mothers.	
United States	14	18	12	18	52
Ireland	11	18	7	8	39
Germany	3	3	5	5	16
England	6	6	1	0	13
Scotland	1	1	0	1	3
France	2	1	0	0	3
Bohemia	0	0	1	1	2
Canada	0	0	1	0	1
Unascertained	5	5	7	6	23
	42	42	34	34	152

Here we have over 50% of foreign-born parents. Ireland stands at the head of the list, and Germany is next with England a close rival.

Of the 76 patients mentioned about 25% are of foreign birth. The occupations of the 42 females are as follows: 30 domestics; 1 clerk; 1 book-binder and 10 none. Among the 34 males we have as follows: 1 sailor; 13 laborers, 7 mechanics, and 13 none. Habits of the women are good, though possibly two have a history of intemperance. There is a history of intemperance in over 26% of the men. The average age at onset of epilepsy in those ascertained was 14 years for both men and women. The oldest man at onset of epilepsy was 50 and the oldest woman was 41. The youngest in either sex at onset was infancy. The average duration of epilepsy in the men was 21 years, in the women 22 years. The longest duration of epilepsy in the men was 55 years and in the women it was 52 years. The shortest duration of the disease in the men was 5 years and in the women it was 6 years.

Of the men, 31 were single and 3 were married. Of the women 29 were single, 10 married, and 3 widowed.

The number of children was ascertained in 51 families out of the 76. The number is 317; 70 of these died during infancy, leaving 247 living. Of these 247, 78 are living epileptics and 3 are insane. This is 32.8% of the 247 who are either epileptic or insane—the epileptic being 31.5%. The causes of death in the number that died in infancy could not be ascertained.

The order of birth was obtained in 19 of the epileptic women under treatment:—5 are the first-born, 2 the second, 5 the third, 1 the fourth, 3 the sixth, 2 the seventh and 1 the twelfth. The order of birth was obtained in 18 of the men:—7 are the first-born, 2 the second, 4 the third, 1 the fourth, 1 the fifth, 1 the seventh, 1 the eighth, and 1 the tenth. According to this it would seem that the first and the third born are more liable to be affected or rather defective than any other order of birth. It is impossible to say whether there is anything of value or not in this statement, owing to so few cases upon which to base an opinion. All the history relative to heredity, birth, onset of epilepsy, duration of insanity, etc., has been obtained by writing a circular letter to each and every correspondent in each case. Some have answered while others have not. Some have been explicit in answering questions, while others did not or could not seem to understand what sort of an answer to give to the simplest question. Others have strenuously denied heredity when at the same time an aunt or an uncle, a brother or a sister, was at the time in the hospital.

Since the opening of the hospital in 1871 there have been 106 deaths among the epileptics, 60 men and 46 women. Of the men, 76% died in *status epilepticus*, and of the women, a little over 69% died in *status*.

The average age of the 60 male patients was 39 years, the extremes being 81 and 18. The average duration of hospital treatment is 2.26 years; the longest under treatment being 10 years and the shortest 2 days. If we do not consider in this estimate of "time treatment" those who were in the hospital for a period less than one year, the average hospital life for them rises to 3.33 years. There were 21 patients who were in the hospital for a time less than one year. The average duration of epilepsy, as far as could be ascertained, in the men was 17 years, the extremes being 4 years and 31 years. The average duration of insanity in these cases was found to be about 9 years. Of the 21 men mentioned as being in the hospital for a period less than one year, 9 were under treatment for a time less than one month.

Among the 46 women the average age was 42 years, the extremes being 76 and 15. The average duration of hospital treatment was 1.56 years. If we do not count in this period of "time treatment" those who were in the hospital for a period less than

one year our hospital life for the women rises to 2.31 years. Of the women 14 were in the hospital for a time less than one month. The average duration of epilepsy, so far as could be ascertained, was 19 years. The average duration of insanity in the 46 cases was found to be about nine years. The average duration of hospital life for men and women, according to our 106 cases amounts to 2.79 years and this does not count any case that was not under treatment for a period less than one year. It would appear from our computation that the hospital life of the male is about one year longer than that of the female epileptic.

The 76 cases under treatment and the 106 that have died make a total of 182 cases, 94 men and 88 women. Of these cases the average duration of epilepsy is 19 years for the men and 21 years for the women. The average age for the 94 men is 37 years; for the 88 women it is 40 years.

From the study of the histories of the 182 cases the onset of epilepsy was:—81.5% were under 20 years of age, the males being 79.41% and the females 83.83%. And 42% were under the age of ten at the onset of the disease.

The average age of our 182 cases at the time of onset of insanity was, for the men, 29 years, and for the women, 28 years. Few became insane under the age of ten. The "great age" for the onset of insanity with epileptics, appears to be, from the histories of our cases, between 20 and 30 years. The next period is between 30 and 40 years.

Of the 76 cases under my immediate observation there were 11 married, 3 males and 8 females. To these 11 families there were born 44 children. Of these 21 died as follows:—5 were still-born, 12 died in infancy, 2 died insane and 2 died in convulsions. Of the 23 living I have been unable to find out positively about two only, and they are both degenerates. However, I have fair reason to think that some others are defective.

The speech defects in the insane epileptics are most interesting and very instructive. The defects in the majority of cases are very hard, indeed, to describe. In at least 75% of the cases that have come under my observation there has been a peculiar hesitation, drawl or linger in the pronunciation of words. Some almost drag out (bradylalia) each word spoken, others have a sad and pathetic tone to all they have to say, while others halt

or linger between words. Then again, we have those who repeat words or sentences (the echo-sign) and there are those who have verbigeration (or echolalia). This speech defect is more noticeable during the disturbed state than at any other time. By an acute and skilled observer a convulsion can often be foretold simply from the frequent and constant repetition of words or sentences. *In fact such a condition of the speech as mentioned should lead one to suspect epilepsy*, provided it occur in the insane. This condition of the insane epileptic is considered at length by Dr. Pilgrim in a paper published in the New York State Hospitals Bulletin for January, 1897, and also by Dr. A. Campbell Clark, of Lanark County Asylum, Hartwood, in a paper published in the April (1900) number of the Journal of Mental Science.

In the examination of the urine of epileptics I find a very interesting condition. My examination of the urine has been very limited, but has extended over a period of more than 80 days for one case. In one of my cases the daily specific gravity averaged 1.025 and in another it was 1.027. The daily amount of urine passed in one case was 1160 cc., and in another, 975 cc. The uric acid excreted in one case was 0.275 grm., and in another it was 0.209 grm. In the case where the daily examinations extended over a period of 80 days I find as follows:

DAILY AVERAGE EXCRETION.

Urine.....	1160 cc
Sp. Gr.....	1.025 grams.
Total solids	48.275 "
Sodium chloride	15.705 "
H ₂ SO ₄ free.....	2.875 "
H ₂ SO ₄ comb.....	0.182 "
Uric acid	0.275 "
Ammonia	0.788 "
Urea.....	26.500 "
Creatinine.....	0.707 "
Hippuric acid	0.470 "

In each case the specific gravity of the urine was invariably higher after a fit. The only exception to this was noticed three times and then the urine was passed at 5 a. m. As to the amounts of uric acid varying before and after a fit I find little difference, though there appears to be a very slight variation in favor of an increase after a fit.

RECAPITULATION.

The insane epileptics in this State amount to 3.5% of the insane population.

The proportion of epileptics to the general population amounts to about one to every 500 or 600.

The number of epileptics who become insane is variously estimated, at from 10% to 50%—a general average being 27%.

The mortality among insane epileptics amounts to about 40%. Heredity can be traced in at least 50% to 60% of the cases, if we consider epilepsy, intemperance, insanity and crime as predisposing factors.

Fifty per cent. of the patients' parents are foreign born; 25% of the patients are foreign-born.

As to order of birth it would appear that the *first* and *third* born are most liable to be defective.

Seventy to 75% of epileptics in the insane die in *status epilepticus*. Hospital life among the men is about 3.33 years; among the women 2.3 years.

The average duration of insanity in these cases was about 9 years. Some speech defect is very common and occurred in at least 75% of the cases under my observation.

In conclusion I wish to thank Dr. S. Bookman for his advice and aid in the chemico-physiological studies here embraced.

DISCUSSION.

DR. WORCESTER: I am particularly interested in one point that was brought out in the paper just read, which confirms what I think must be the observation of all of us, as to the very large mortality of these patients from epilepsy. If you look at the books on general medicine and the neurological books you will get the impression that epilepsy is not of serious prognosis as regards life. I published some years ago a paper in the *Journal of Nervous and Mental Diseases* on the mortality of epilepsy in the hospitals for the insane, in which it would appear, so far as I could obtain the statistics, that something more than 50 per cent. of the epileptics who died in those institutions died from epilepsy. In the three institutions with which I have been connected the percentage has been about 50. It seems to me a very interesting question whether the epileptics that obtain admittance into hospitals for the insane are different in their prospects for life from the general epileptic population, or whether the neurologists are all in the wrong as to the prognosis of this disease. The only other alternative would seem to be that there is something in the treatment of epileptics received in hospitals for the insane which is especially favorable to the development of the *status epilepticus*. No particular notice seems ever to have been taken of the statistics which I collected upon that subject by subsequent writers on the subject. The same old statements have been repeated in almost the same words in works published since that time, and there is the same discrepancy between the statements of neurologists and general practitioners and the facts as they have come under observation.

CLINICAL STUDY OF THYROID EXTRACT.

*By Wm. F. Drewry, M. D., and J. M. Henderson, M. D.,
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After the very scientific papers on the subject of thyroid extract in the treatment of insanity, read before the Association, at its meeting a year ago, and at previous meetings, it would indeed seem superfluous for us to attempt to present any thoughts on the subject; but as perfect knowledge of any subject is usually gained in fragmentary ways—by sifting the evidence, as it were, pro and con, we beg to submit these clinical notes on this new remedy.

It is by research, close and prolonged observation of many cases, by comparison of opinions, founded on experience of different investigators, that we finally ascertain the real clinical nature of any medicinal agent.

Of the animal extracts, thyroid was the first to attract the attention of the medical profession. Its usefulness has been tested by capable investigators in the treatment of cretinism, myxœdema, catalepsy, tetany, torticollis, epilepsy, Graves' disease, some skin diseases, uterine fibroids, amenorrhœa, insanity, etc., with varying degrees of satisfaction to the patient and the experimenter. Its therapeutic value has not yet been definitely settled; indeed it has not yet risen above empiricism and been accepted as one of the regular, reliable remedial agents, certainly in the treatment of insanity.

Stimulated by the flattering reports made by some, of the therapeutic value of thyroids in mental diseases, we began in 1896, a series of careful experiments, selecting 88 cases at our hospital, representing different types of insanity as follows: 47 cases of mania, in which insanity had existed for various lengths of time; 23 cases of melancholia, representing various stages from

the acute to chronic, of several years duration; 6 of epileptic insanity of different types; 2 of primary dementia; 4 of secondary or terminal dementia; 2 of parietic dementia; 2 of paranoia; 1 of circular insanity, and 1 of imbecility. The time insanity had existed before treatment began varied from two months to 17 years. Twenty-five cases were men and 63 women; the ages ranged from 17 years (the youngest) to 56 years. Our cases were considered fair representatives of the hospital population. From a careful study of their histories and condition at the time the medicine was begun, we regarded the prognosis as favorable in 22 cases, unfavorable in 42 and doubtful in 24, that is, under the ordinary line of treatment in such cases. As to the form and dosage of the substance, the administration, the management of the cases, etc.: *First*, the powdered extract freshly manufactured by Parke, Davis & Co., was used and given by mouth; *second*, the dose varied from 2 to 60 grains gradually increased, repeated from twice to 6 times a day; in some a uniform dose of 3, 5, 10 or 15 grains was given throughout the treatment; *third*, it was usually given before the meals, though in some it was given after meals; *fourth*, the length of time the drug was given varied from 14 to 90 days, and in some the course of treatment was interrupted for a few days or a week, while in others there were two or three distinct trials of the remedy; *fifth*, some patients were kept in bed, while others were not; *sixth*, extra nutritious diet was given some, while others took the regular hospital bill of fare; *seventh*, special attention was given in every case to hygienic regulation, the clothing, etc.; *eighth*, in each case several days before, during treatment and for several weeks afterwards, careful observations were made and recorded once, and usually twice a day, of the temperature, respiration, pulse, gastro-intestinal disturbances, secretions, vertigo, headache, nervousness, habits, mental changes, etc.; weight charts were also kept; *ninth*, before beginning the remedy the secretions and the general condition of the patient were looked after, and the patient put in as favorable condition as possible; *tenth*, on discontinuance of the powders tonics were given in some cases, in others there was no after treatment. We selected two cases, one of chronic mania and one of chronic melancholia, upon whom we made the same observations as we did in the thyroid cases with the view of making comparisons,

etc. From very careful study of the patients and from constant observations of the clinical charts, we were unable to see that it produced any uniform, definite action on the temperature, respiration, pulse rate, secretions, etc. In no cases were there any perceptible effects on the appetite; in only four cases was there any gastric discomfort or nausea. There was no vertigo, nervousness, headache, etc. We observed no change in quantity, color, reaction and specific gravity of the urine. The blood was not examined. Some patients lost in weight, particularly those treated in bed, others gained and still others were neither reduced nor increased. Special attention was paid to the cardiac apparatus and in no case did we encounter any dangerous symptoms or deleterious effects, even where dram doses were given every three hours for a whole day, or when half-dram doses were given three times a day for several consecutive days. One patient who had never taken a dose before, was given 60 grains at once without any apparent untoward symptoms whatever—there was absolutely no reaction in any particular. In the two cases in which no medicine was given the pulse varied from 53 to 108, the temperature from 97 1-5 to 99 4-5, and the respiration from 18 to 29. Unlike some other investigators, we failed to observe quick transformation from dullness or stupor to active mentality; immediate tranquilizing effect on the excited and disturbed; the rapid, marked improvement in habits and conduct. In those in which there was apparent response to treatment, it came about gradually and not suddenly, except perhaps in one case of hystero-mania, in which apparent good effects began on the third day of treatment. The size and frequency of dose seemed to make no appreciable difference as to effects on pulse, respiration, temperature, etc., for these varied as much when small as when large doses were given. The highest temperature attained was 102, when only 10 grains were being taken t. i. d.; the highest pulse rate was 135, when 20 grains were being taken t. i. d.; the highest rate of the respiration was 42, when 20 grains were being taken three times a day. To foretell what effect, if any, the drug is going to have is impossible. There is, according to most observers, a great variation in susceptibility to its effects—every case being a law unto itself. If the drug had any constant, definite, physiological action in our cases we failed to discover what it was. Brief clinical histories of a few cases,

clearly demonstrate the "inconsistencies" of the action and effects of the drug.

Experience of any of us, demonstrates that in any case of insanity, under ordinary circumstances, the pulse, respiration, temperature, secretions, mental condition, appetite, etc., will vary some from day to day or during the same day. Another fact is known to all, that many cases of insanity recover without any especial medicinal treatment—rest, diet, changed environment, nursing, moral treatment, etc., will suffice in some cases. While a few of our cases seemed to be influenced, in some mysterious way, by the thyroid, perhaps the much larger proportion were unaffected during or following treatment, either mentally or physically. On the whole, the results we obtained were not as satisfactory as those reported by some others. With few exceptions, the effect on the mental condition was negative; and in those in which recovery or improvement did take place, the careful and constant nursing and attention, tonics, etc., doubtless were no unimportant factors in bringing about the result. Had we selected our cases, that is, taken cases which had fair prospects of recovery or improvement under other forms of treatment, the results might have been more encouraging. Perhaps our failure to get good results in more cases, was due to some improper manner in the administration of the drug, or that our cases were unsuitable ones for this special drug. We append to this report a condensed statement of all our cases:

To summarize results due, perhaps, to the thyroid, 6 cases, or seven per cent. of the whole number treated, recovered; 9, or slightly more than 10 per cent, permanently improved; and 8, or 9 per cent, improved temporarily and then relapsed; and 55, or 62 per cent. were not affected by the treatment, mentally or physically. Of the six cases in which recovery seemed to have been due perhaps to the thyroid, 3 were cases of acute mania, 1 acute melancholia, 1 agitated melancholia and 1 chronic mania; of the 9 cases in which permanent improvement might be attributed to the remedy, 1 was acute mania, 2 acute melancholia, 2 chronic mania, 2 recurrent mania, 1 recurrent melancholia and 1 epileptic mania. Of the 8 cases in which temporary improvement occurred, 2 were acute mania, 4 chronic mania, 2 chronic melancholia and 1 epileptic mania. After giving the

thyroid a fair and conscientious trial, in those cases in which no improvement followed within a reasonable length of time, we instituted other treatment. The results up to the present time, in our 88 cases are as follows: Twelve discharged recovered, 13 discharged improved, 9 died, 54 remain in the hospital—4 of whom are improved, and 48 either stationary or tending to secondary or terminal dementia.

From our experience, with thyroid extract, we conclude: First, that it is a remedy of very limited value, if any, in the treatment of any form of insanity. Second, that those cases apparently benefited by it, owe their improvement or recovery as much, or perhaps more, to other agencies, such as better nursing and attention, rest, dieting, tonics, etc., than to the thyroid. Third, that it is in the so-called curable cases—acute form—that improvement or recovery seem to be the result of thyroid treatment—cases that would either get well without any especial medicinal treatment or from the treatment usually followed in such cases. Fourth, that ordinarily, thyroid extract may be given with impunity without producing dangerous symptoms of any kind. Fifth, that having tried every rational line of treatment without good results, it is perhaps well to give the thyroid treatment a trial.

Case 20.—B. J., female, age 41, admitted April 2, 1895—chronic mania, habits filthy, very noisy, destructive and quarrelsome and slept badly. April 10, 1896, was given thyroid extract in 2 gr. doses t. i. d. April 27th, no appreciable effect had been noticed on temperature, pulse or respiration. April 27th, the dose was increased to 3 gr. t. i. d., with no effect on temperature, pulse or respiration; mentally brighter, quieter and habits neater, also sleeping better. May 21st, dose increased to 4 gr. t. i. d. No effect on temperature, pulse or respiration, continues to improve mentally. From June 9th to 22d, no thyroids given, improved mentally. June 23d, dose increased to 5 gr. t. i. d.; no effect on temperature, pulse or respiration; very much improved mentally. June 30th, thyroids discontinued, tonics given. September 30th, was discharged recovered. April 26, 1898, had a relapse and was again admitted and died in hospital some months later of dysentery.

Case 23.—C. J., female, age 39, admitted to hospital March 16, 1893—chronic mania, noisy, restless, habits filthy, slept fairly

well. June 23, 1896, was given thyroids in 5 gr. doses t. i. d.; temperature, pulse and respiration unaffected, no change mentally. June 29th, dose increased to 20 gr. twice daily; no effect on temperature, pulse or respiration, lost 7 pounds in weight, no change mentally. July 6th, dose increased to 20 gr. t. i. d., maximum temperature, pulse and respiration reached while on this dose; gained in weight $4\frac{1}{2}$ pounds within one week. July 12th, thyroids stopped, tonics given, slight improvement mentally, habits better. August 12th, tendency to relapse into former condition. September 2d, again treated with thyroids, given 5 gr. t. i. d. for 15 days; no effect on temperature, pulse and respiration, no change in weight, no change in mental condition; six months later had relapsed into condition in which she was when treatment was begun and now remains at standstill.

Case 61.—M. B., female, age 31, admitted to hospital August 8, 1895—agitated melancholia. Suffered with insomnia, very restless and untidy in habits, most painful mental condition, wringing hands, crying, etc. All lines of treatment usually employed in such cases had been tried with no success, patient growing worse and worse. June 22, 1896, was given thyroid extract 5 gr. t. i. d.; no effect on temperature, pulse or respiration, as compared with chart kept previous to giving thyroid. June 29th, dose increased to 10 gr. t. i. d.; temperature, pulse and respiration unchanged, lost 4 pounds in weight since treatment began, brighter mentally, sleeps fairly well and habits neater. July 6th, dose increased to 20 gr. t. i. d.; and was kept on this dose for 6 days, then drug stopped, temperature, pulse and respiration unaffected; much brighter mentally and habits neater; sleeps better, but very irritable. September 2d, again gave thyroid extract in 5 gr. doses t. i. d. for ten days, then stopped and tonics given for two weeks, then thyroid extract was again given in 5 gr. doses t. i. d. for one week, then stopped and tonics given, patient very much improved in every respect and was discharged September 30, 1897, recovered. Has had no relapse.

Case 79.—M. H., female, age 40, admitted to hospital May 22, 1896—hystero-mania, habits careless and untidy. In fall of 1898, patient got into an altercation with another patient, became nervous and emotional, said that her legs were paralyzed, etc.; could not be induced to walk, though there seemed to be no

disease to prevent her. Electricity, etc. was tried without success. Hysteria was our diagnosis. March 2, 1900, was given 10 gr. thyroid extract t. i. d.; temperature 97 4-5, pulse 96, respiration 23, changed to another ward and tepid baths given daily. March 14th, in the morning, temperature 99 4-5, pulse 82, respiration 18; in evening, temperature 100, pulse 102, respiration 23. Taking 10 gr. thyroid extract t. i. d., had tepid bath daily at 10 a. m.; objected to bath. March 15th, walked to bathroom and was bathed without resistance; habits neat, temperature 99, pulse 88, respiration 21. March 19th, above dose continued; patient takes daily walk, motor action good, mentally brighter; temperature, pulse and respiration unaffected. April 1st, dose increased to 55 gr. twice daily; no effect on temperature and respiration; pulse increased in frequency; this dose continued until April 6th, when patient complained of nausea and vomited; drug then discontinued; maximum of pulse, temperature and respiration was noted while taking 10 gr. t. i. d.; no improvement in mental condition of patient.

Case 11.—M. R., female, age 30, admitted to hospital January 16, 1899—acute mania, mentally calm, habits tidy, slight insomnia. February 24th, gave 5 gr. thyroid extract t. i. d.; temperature 99, pulse 88, respiration 22. March 8th to 14th, no thyroid given; patient menstruating. March 15th, dose increased to 15 gr. t. i. d.; temperature, pulse and respiration unaffected; complained of slight nausea and headache; gained 3 pounds. March 17th, dose increased to 20 gr. t. i. d.; temperature, pulse and respiration unaffected; complained of headache, no nausea. March 20th to 24th, no thyroid given, and no change mentally. March 25th, dose increased to 25 gr. t. i. d.; temperature, pulse and respiration unaffected; does not complain of nausea and headache; has lost 7 pounds in weight since March 17th; no effect mentally. March 25th, dose increased to 30 gr. t. i. d.; pulse, temperature and respiration unaffected. March 29th, dose increased to 35 gr. t. i. d.; temperature, pulse and respiration unaffected; complained of nausea and headache; no change mentally. March 30th, dose increased to 40 gr. t. i. d.; temperature and respiration unaffected; pulse 111; no nausea and headache. March 31st, increased to 50 gr. t. i. d.; temperature, respiration and pulse unaffected; complained of headache and nausea; no effect mentally. April 1st, dose increased to 60 gr.

t. i. d.; temperature and respiration unaffected, pulse 124; no nausea and headache complained of. April 2nd, 60 grs. were given every three hours with no bad symptoms; temperature, 99, pulse, 128, respiration 30; maximum of pulse and respiration was noted while taking 60 gr., maximum and minimum temperature while taking 5 gr. April 4th, two days after thyroids stopped, temperature 98, pulse 124, respiration 26; loss in weight 8 pounds since treatment began. No change in mental condition.

Case 43.—Male, age 24, admitted December 18, 1897—acute melancholia; cause stated in commitment papers—heredity and masturbation; very much depressed mentally, habits untidy, physical health poor. April 1, 1898, given thyroid extract, 4 gr. t. i. d.; temperature 97.4-5, pulse 60, respiration 19; no change mentally. April 27th, dose increased to 10 grs. t. i. d.; temperature, respiration and pulse unaffected; loss in weight 6½ pounds since treatment began; no change mentally; physical condition improved. April 29th, thyroids stopped; maximum and minimum pulse, temperature and respiration noted while taking 4 grs; no change mentally or physically; was then put upon aqueous extract of opium ¼ gr. t. i. d., with intestinal antiseptics. May 15th, improvement began and continued until recovery. Was discharged recovered, September 30, 1898; no relapse.

Case 59.—Male, age 26, admitted December 14, 1898—chronic melancholia, depressed habits, untidy; physical health fair. May 9, 1899, was given thyroid extract in 3 gr. doses t. i. d.; temperature 98, pulse 60, respiration 24. No effect on mental condition. May 14th, dose increased to 4 grs. t. i. d.: temperature, pulse and respiration unaffected and no change mentally. May 19th, dose increased to 6 gr. t. i. d.; temperature, pulse and respiration unaffected; no change mentally or physically. May 31st, thyroids stopped, loss in weight 1 pound; no change mentally or physically; habits unimproved and remains in the hospital unchanged; no relapse.

RECIPROCAL RELATIONS.

By *W. B. Lyman, M. D.,*
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"Bowed by the weight of centuries he sits,
A hopeless waste upon the sands of time:
The emptiness of ages in his face
And on the world the burden of his state.
Whose was the hand that fashioned thus his mould?
Whose breath blew out the light within his brain?
How shall the future reckon with this man?"

This mighty question has fallen to us as heirs to enlightened civilization. No longer we ponder in a metaphysical vagary of thought, but are guided by unerring revelations of science to recognize and accept individual conditions and conduct as a product of environment, thus burdening public conscience with the moral responsibility of every crime and mental defect, for which in the past we were wont to make liable solely the actor or unfortunate sufferer—a veritable merging of the *ego* into the *alter* a softening of the dividing line, a lessening of the responsibility of one corresponding to the increase of that of the other. Fatalistic as it may seem, it certainly is not faulty to acknowledge that man's basic worth is fixed by eternal laws and his intrinsic worth is measured by fractions or units in accordance with the fate of his environment. Truly a creature of fixed fate; and yet, the ray of light beams through all, in that Eternal Wisdom has endowed the race with altruism which tends ever to divine purpose, the end of which, though far from sight, we feel is just and right.

Dominated by passion, born of instinct, or by reason, man is equally the legitimate offspring of his ancestry for centuries and would we mitigate his condition, society must take cognizance

of this fact and shield behind a mantle of charity his every fault. Unless the perplexing problems of social evolution shall have modified themselves, so that they are not ever and anon requiring conduct in advance of biological evolution, some must ever be sacrificed in the struggle for perpetuity of principle and race, and the sternest problem presented now is the conservation of energy and correction of error in the demands of social life until in the process of mental and moral evolution, the weaker of mankind shall have become strong enough to meet the exigencies of his fate. Social restraint seems too great when one to two hundred individuals fall by the wayside and become objects of public charity. Statistics show twenty-five times more insane proportionately in six million people as between Egypt and Scotland at the present time. The forces of evolution making for either what we call good or evil are eternally active. As the biologists teach us, any restoration of the human race to-morrow to a fair level of physical and mental equality would still be followed inevitably by a new crop of degenerates in the next generation. So it follows that any Spartan method of dealing with defectives must utterly fail, and the objection to the doctrine of altruism on the basis of interference with the survival of the fittest is thoroughly weak from any large standpoint.

Misspent energy in social forces must give way to wellspent energy; unguided, blind action must be directed into useful channels guided by the light of reason, rather than expending itself in blind fury prompted by emotion; the ethical obligations must be more correctly defined and the pessimism of a deserved eternal punishment be abolished. An environment of accommodating circumstances must be created to improve rather than neglect defective organisms, else the reproduction, increasing from generation to generation till extinction, only too long deferred, perpetuating indefinitely an endless number of intermediary defectives to be assimilated and become dependent. The burden must be assumed when resulting from irrational exactions by an age overburdened with Puritanism, idealism, and asceticism—perhaps led by a higher rather than a lower degeneracy as Nordau would have us believe.

Thus to render a being anti-social must be held equally responsible with anti-physiological heredity as cause for insanity and criminality, and responsibility must be assumed accordingly.

Has society assumed the responsibility even yet in the proper spirit? Is not our philanthropy too meagre? Is the tendency not ever to circumscribe within lines drawn by too narrow a commercial policy in deference to a spirit of self-interest and greed? Is the measure of charity not filled with too much kindly expression of *thought* rather than kindly *doing* and *giving*? Is the vulgar question, "What will it cost?" not the only one carefully weighed in dispensing public gift? Are the arguments advanced to ever burden the individual rather than the community just, and is the point well taken?

Based upon the above philosophy, my contention is that to throw the care of the dependent upon those of his kin or family, increasing frequently beyond measure their already too heavy load, and further to neglect in any particular any aspect of his well-being by public charity is injustice, inexcusable in the present time and generation. A product in the process of evolution of his time and race, anti-social from inherent fault not of his own choosing, he makes just demands upon his fellows, not alone upon his immediate ancestors or kith and kin, of whom *his* fault should be evidence that *they* are little able to stand unusual stress. The responsibility of family ties is in this case one to be assumed by the community, not to be thrown back upon innocent victims of an accidental union. Wounded feelings, heartaches and longings must be endured, but we owe every effort to mitigate these and not add to them through enforced poverty and want. Individuals cannot and do not lose their identity when merged into families, and if protection of society demands isolation of one member, and that one oftenest the wage-earner, by what right is it demanded that helpless ones shall divide only a crust of bread, or else be required to sacrifice laudable pride by begging? Provision should be made for these as a matter of right which is their due. Much has been said and written about the obligation due to the insane upon discharge from custody, or even to the criminal. What can be done better than to keep intact their home, a place of refuge for return, rather than subject it to every chance of ruin through temptation or want forced upon it by accident other than fault! What an unjust burden would be lifted from many worthy, aching hearts!

Ideas of punishment for the purpose of reformation are past; all in the light of present science demanded is restraint for protection; the lesson has to be learned; punishment here or threatened hereafter does not reform a criminal or prevent crime. When crime is due to accidental causes, there is nothing to reform; when it is due to lack of moral structure or equilibrium in the individual, elements necessary for reform are wanting in his defective organism. Prevention through adjustment of the social obligation is the only remedy. And so, also, we must meet the overly proud, self-sensitive, or apprehensive, suspicious person in the border-land of insanity. Restraints must be instituted to prevent such from taking unto themselves idols, the loss of which is apt to precipitate shock that overbalances an unstable mental organism. Greater scope must be given for more general distribution of affection. Our social system tends to the building of such idols which become a very part of the individual. Present methods are over-exacting of filial and family ties, wrecking lives through enforced obligation that does not exist, thus building up undue and, as it were, too concentrated affection. How can emotions be made subservient to judgment and reason when thus fostered in an over-sensitive mind, and a catastrophe be thereby prevented? It is time that mental alienation consequent upon enforced starvation and want should be averted by a wider distribution of charity extended by the State. Surely this should be one of the functions of government in this age of so-called philanthropy. Adoption of a political economy that will allow individuals to accumulate several millions a year and equally worthy persons suffer for necessities of life, from conditions of its own making, will fail, and should fail in the process of social evolution. I quote as follows:

“But as already observed, the sympathetic emotions are still too feebly developed, even in the highest races of men. We have made more progress in intelligence than in kindness. For thousands of generations and until very recent times, one of the chief occupations of men has been to plunder, bruise and kill one another. The selfish and ugly passions which are primordial, which have the incalculable strength of inheritance from the time when animal consciousness began, have had but little opportunity to grow weak from disuse.

"The tender and unselfish feelings which are a later product of evolution have too seldom been allowed to grow strong from exercise. And the whims and prejudices of the primeval militant barbarism are slow in dying out from the midst of peaceful industrial civilization. The coarser forms of cruelty are disappearing and the butchery of men has greatly diminished. The most people apply to industrial pursuits a notion of antagonism derived from ages of warfare and seek in all manner of ways to cheat or overreach one another, and, as in more barbarous times the hero was he who had slain his tens of thousands, so now the man who has made wealth by overreaching his neighbors is not uncommonly spoken of in terms which imply approval. The virtues of forbearance and self-control are still in a very rudimentary state and of mutual helpfulness there is far too little among men. Human progress means throwing off the brute inheritance."

To sacrifice men in battle is much more honorable in a nation than to sacrifice men, women and children to this spirit of commercial greed. So long as human strife shall keep rife the egoistic instincts and cultivate them to abnormal excess, so long must the victor care for the wounded in battle and assume his obligations. In an ideal civilization it would not be possible for persecutory delusions and undue suspicions to exist after sufficient time had elapsed to allow of suspension of these emotions from disuse. Could ideas of absolute justice dominate the race, animal emotions springing from instincts of self-preservation must die; but all know and feel that few receive just deserts under the now prevailing conditions, and the individual was never so preyed upon—an unhappy life alone is spared, left a victim of carking care, to be flung at the feet of the victor self-sacrificed.

Deterred from the violent outward display of emotion which was possible in man's former state, it is reflected inwardly into consciousness with increased violence, often sufficient to overthrow the normal balance of molecular or atomic activity, eventuating in mental chaos. Why, then, again I ask, must this burden be inflicted upon the just as well as the unjust? Is the higher sympathetic development not now in process of forming and becoming ingrained in structure, so that this broader charity may be inculcated into civilization simply by the teaching?

Or must the pendulum swing back and social progress await the building up in structure of altruistic habit? Enlightenment would prompt as bitter a fight as blind fate amongst the heathen against encroaching Christendom, for truly is it not history that their very lives are at stake? Has any heathen nation withstood its demands without perishing and being laid in the dust? No more forcible argument than this that morality and reason must be the product of gradual evolution—a leopard cannot change his spots. Only recently first England and later our country have taken cognizance of this fact in conditions imposed upon colonies of barbarous people forced under their protection by destiny. They must verily work out their own salvation, guided by the light that is given them; it is hoped, aided by the fostering care of an advanced and broadened charity freed from fanaticism.

Again I leave the question with you—By what earthly right is State charity dispensed measured only by limited pecuniary obligation, rather than Christian obligation in a Christian nation, where man to man should brothers be?

“For if we lift a people like mere clay,
It falls the same.”

SEPARATE PROVISION FOR TUBERCULOUS PATIENTS IN STATE HOSPITALS FOR THE INSANE.

*By Arthur H. Harrington, M. D.,
Superintendent Danvers Insane Hospital, Hathorne, Mass.*

The scope of this paper is to present to you such information as I could obtain regarding the prevalence of tuberculosis in State hospitals for the insane in the United States, to indicate the need, which I believe exists in our State hospitals, of giving greater attention to the keeping apart of the tubercular from the non-tubercular patients, and of bringing forward what is being attempted and what has already been accomplished along this line.

Osler has stated in his work upon "The Principles and Practice of Medicine," that "tuberculosis is the most universal scourge of the human race," and authorities generally, agree in affirming that of deaths from all causes, one-seventh are due to tuberculosis.

Inquiries have been made in the past by various investigators regarding the question of the amount of tuberculosis among the insane in hospitals and asylums, and the death rate from this cause. In Tuke's Dictionary of Psychological Medicine, Clouston is authority for the statement that "in the older institutions where the hygienic conditions were bad, the number of deaths from phthisis was from 25 to 30 per cent. of the whole number who died." From 1842 to 1863, the percentage of deaths due to tuberculosis was found by Clouston to be 29. During the first twenty-three years of the existence of one of the Scottish asylums, the death-rate from phthisis was 35.4 per cent. of the whole number of deaths.

In a prize essay by F. G. Crookshank, M. D., published in the October number of the Journal of Mental Science, 1899, the

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phthisis mortality in various English asylums from 1871 to 1897, varied from 9.5 to 17.5. In 1862, Workman found in eight American asylums, that consumption was the cause of 27% of the whole number of deaths.

Dr. J. W. Babcock, in a paper read before this Association in 1894, states that in the insane asylums of North Carolina, the proportion of deaths from tuberculosis upon the whole mortality, for the ten years ending November 1, 1893, was from 14% to 34%, averaging 22%. From the reports of ninety-eight other American asylums, published previous to 1894, Dr. Babcock, in the same paper to which I have just referred, presents a table in which he has tabulated the percentage of deaths in these asylums, from tuberculosis:

Mortality from Tuberculosis in 98 American Asylums.

NO. OF ASYLUMS.	PERCENTAGE OF DEATHS.
3	0
1	0- 1
2	1- 5
14	5-10
16	10-15
24	15-20
14	20-25
18	25-30
6	30-35
3	35-40
1	50-60
1	60

Dr. Babcock also obtained the total mortality from tuberculosis in eight American asylums from their beginning, and found it to be 21% of the total mortality from all diseases.

In order to gauge, if possible, the extent to which tuberculosis has prevailed in the State hospitals for the insane throughout the United States for the five years ending with 1899, I addressed a circular letter to these hospitals in January, 1900, containing four leading questions. The first two questions were as follows: (1) What has been the total number of deaths for the last five years in your institution? (2) How many of this number have died of tuberculosis, or of phthisis or pulmonary consumption, used in the sense of synonyms of tuberculosis. In tabulating the result of these two inquiries, I have, partly for convenience and partly for the purpose of comparison, divided the hospitals

into groups according to their geographical distribution, thus: The New England States forming one group; the Middle States a second group; the Western and Southwestern States a third group, and the Southern States a fourth group.

To the two questions which I have cited above, I received replies from sixty-seven State hospitals throughout the United States, and the replies given in terms of the total for each group, are as follows:

NEW ENGLAND STATES.

Total number of deaths in all institutions heard from, from all causes, in five years, 3,208.

Total number of deaths from tuberculosis in same hospitals, during same period, 383, or a death rate of 11.9%.

MIDDLE STATES.

Total number of deaths in all institutions heard from, from all causes, in five years, 4,494.

Total number of deaths from tuberculosis in same hospitals, during same period, 611, or a death rate of 13.3%.

WESTERN AND SOUTHWESTERN STATES.

Total number of deaths in all institutions heard from, from all causes, in five years, 8,853.

Total number of deaths from tuberculosis in same hospitals, during same period, 1,353, or a death rate of 16.8%.

SOUTHERN STATES.

Total number of deaths in all institutions heard from, from all causes, in five years, 1,958.

Total number of deaths from tuberculosis in same hospitals, during same period, 393, or a death rate of 20.1%.

It will be observed that the percentage of deaths from tuberculosis increases as we pass from the first to the last group.

We may, perhaps, be warranted from this in forming the supposition from these figures (and it may be a natural one also as opinion goes), that tuberculosis exists to a greater degree in the Southern States than in other States, but it must be remembered that all the hospitals in the country have not been heard from, and are, therefore, not included in this enumeration;

therefore, it is not safe to make this generalization too positively.

Another deduction which comes out from these figures as they have been given me, is that the hospitals differ widely from each other in the comparative number of deaths from tuberculosis; and this without regard to their division into geographical groups. Thus, of the sixty-seven hospitals, I have made a table showing the number in which the percentage of deaths from tuberculosis has been less than 5% to over 60%:

<i>No. of Hospitals.</i>	<i>Percentage of deaths from Tuberculosis.</i>		
5	Less than 5 per cent.		
12	Between 5 and 10	"	
16	" 10 "	15	"
17	" 15 "	20	"
5	" 20 "	25	"
6	" 25 "	30	"
2	" 30 "	35	"
1	" 35 "	40	"
1	" 40 "	50	"
1	" 50 "	60	"
1	" 60 "	65	"

The total number of deaths from all causes reported from these 67 hospitals, was 18,513. The total number of those dying from tuberculosis was 2,741. Therefore, the death rate for 67 hospitals and asylums for the insane in the United States has been for the past five years, 14.8.

Having given considerable thought to the subject of tuberculosis in insane hospitals, and accepting the authoritative statement that throughout the country in general life, 15% of all deaths are due to tuberculosis, I think we cannot view with composure the presentation that many hospitals for the insane in the United States, have a death rate exceeding what, if you please, is the legitimate death rate from tuberculosis. But the fact would seem incontrovertible, for out of the group of 98 hospitals, reported by Dr. Babcock in 1894, and out of the group of 67 unselected hospitals, which I report to-day, and for which I include the returns for the past five years, more than half—50% in my group, and 63% in Dr. Babcock's group—have a death rate from tuberculosis extending all the way from 15% to 60%.

For obvious reasons, we are obliged to gauge the prevalence of tuberculosis in our asylums largely by the death rate, and

while some of our State hospitals appear to be comparatively free from tuberculosis, in others it prevails to a considerable, and even serious extent, while in many of them, it is several times greater than in the community at large.

We are next led to make a resumé of some of the causes which have been alleged to account for the increased mortality from tuberculosis among the insane in hospitals. It has been said that the insane are persons peculiarly liable to tuberculosis; that many persons come to our hospitals with an hereditary tendency to tuberculosis; that confinement favors the development of the disease; that in the insane the defensive resistance of the bio-plasm is diminished; that many are admitted with the disease already upon them. Investigations have been made which, as far as carried out, show that the insane in private dwellings are not more subject to phthisis than other persons.

It has been made quite clear by Crookshank, in his recent article, in his investigation of 1,000 persons, that a number of them acquired tuberculosis after they entered the hospital, and I feel warranted, as I believe many of you would, in affirming that as far as could be determined, we have known patients to acquire the disease in the hospital.

Our knowledge of the disease to-day will not allow us to appease our consciences with old-fashioned notions that tuberculosis is hereditary, or that it is a necessary accompaniment of insanity, and that we are powerless to stay its progress. The force of hereditary tendency must be admitted, the diminished resistance of the insane to disease must be granted, allowance must be made for a number of patients admitted, already having tuberculosis, but we know that a necessary step in the production of tuberculosis is the access of the bacillus to the organism. And where are the conditions more favorable for the access of the bacillus to a host than in our large insane hospitals?

Under the conditions, many of our patients are obliged to have as their companions, persons afflicted with the disease in a form sufficiently active to produce about them, as it has been expressed in a figure of speech, "a halo of bacilli." No matter how much we may disinfect our wards and rooms; no matter how carefully we may carry out all our regulations in regard to utensils used by the tuberculous, yet, none of us can view without apprehension a patient domiciled on the same ward with

other patients, who has an active tuberculosis and an excretion of sputum which, with our own eye, we may have seen under the microscope to be crowded with bacilli, knowing also, as has been proved, that such a person may expectorate from several million to three and one-half billion bacilli in twenty-four hours.

Dr. Bucknill, after paying special attention to the subject of consumption in the insane, for years, concluded, to use his own words—"That phthisis, which forms so large a percentage of the mortality of asylums for the insane, is the product of the institutions"—and we must in this country, I believe, subscribe to a considerable extent, at least, to the correctness of this view. While I believe that we all, who have observed a considerable amount of tuberculosis in our hospitals, have been impressed with the feeling that some steps ought to be taken at once to adequately separate patients with active tubercular lesions from the non-tubercular, in order to see if such impressions had brought about any practical result or solution, I addressed two other questions as follows: Question 3,—Have you in your institution any provision for separating recognized cases of tuberculosis from the non-tubercular? Question 4,—Have you in your State any requirement by supervisory or State authority for separating the tubercular from the non-tubercular in State hospitals for the insane?

The answer in the majority of cases to these questions was "no," but in most cases the great desirability of accomplishing a separation was expressed. I should like to quote directly the replies which I have received to these last two questions, but time will not permit, but I shall have to sum up the trend of thought and work in this regard.

I find that quite generally efforts are being made as far as conditions will allow, to bring about isolation of the tubercular insane. In some hospitals, the most that can be accomplished is putting the tuberculous patients into a separate room, off the general ward. Others, with hospitals built upon the Kirkbride plan, are setting aside a ward for the purpose. Some send all tuberculous cases to an infirmary ward, which may, however, contain non-tubercular patients. Some find it impossible to isolate to any practical extent on account of overcrowding. Some can only employ sanitary measures as disinfecting, general hygiene and frequent painting.

One hospital has asked for an appropriation for a separate ward for these cases, not granted.

One superintendent has been making efforts for the past five years to secure the erection of an infirmary for tuberculous cases.

At the Eastern Washington Hospital, provision has been made for the building of an infirmary for such purposes.

At Osawotomie, a building is to be erected within a year for such purpose.

The Northern Indiana Hospital has under construction two small wards for complete isolation of advanced cases.

In Indiana I learn that it is the aim in all the hospitals, as far as conditions will permit, to isolate the tuberculous.

The opinion is expressed by several superintendents that all tuberculous cases should either be isolated or removed from the institution.

In Michigan, the State Board of Health is pushing various plans for prophylaxis. They are urging a separate hospital for the tuberculous insane.

In several States, particularly in the west, active measures are being urged to bring about separate provision for the insane who are victims of tuberculosis.

I am able to report the gratifying results in two institutions where, a few years ago, separate buildings, allowing isolation of tuberculous insane patients, were constructed. One was at the County Asylum, Lancaster, England. Dr. David Blair reports, that since its occupation, the death rate from phthisis has been reduced by nearly one-half.

Dr. A. B. Beattie, of the Southern Illinois Hospital, writes me that a separate cottage was constructed a few years ago for tuberculous female patients. Since that time the number of tuberculous female patients has been markedly reduced.

I regard these two instances as of striking evidence in showing what has and what undoubtedly can always be accomplished by complete isolation of the tuberculous insane from the other patients of the hospital. In fact it has become axiomatic that the degree in which tuberculosis is controlled depends altogether upon how far-reaching the preventive measures are.

Disinfection, hygiene, the systematic care of the immediate surroundings of the patient are good as far as they go, but I believe there is nothing short of isolation, sufficient to prevent

the association of the tubercular with non-tubercular patients, which will give us the proper immunity. And we can see that this conviction is steadily growing in the minds of many of the superintendents of hospitals for the insane in this country, in the efforts of which, as I have shown some of them are making, and in several instances successfully, to establish isolation wards in fact and not in name.

Should a single acute disease, of an infectious nature, annually add to our death rate from 15 to 30%, and even more, as we find that in some hospitals tuberculosis does, we would take the most stringent methods to suppress it; but, because of the insidiousness of tuberculosis, and because, I suppose, we have always had the disease with us we have, it seems to me, taken it as a matter of course that it must always remain.

But I believe the indications are that greater attention is to be given to this subject in the near future in our hospitals. For: *First*, we know that tuberculosis is a disease which is capable of being greatly limited by proper management. *Second*, we know that proper management consists in separating the tubercular from the non-tubercular in our hospitals. *Third*, it is the duty of the State to provide its hospitals with the means of taking care of its tuberculous insane in such a manner as shall prevent the infection of the non-tubercular, and also give those suffering from the disease the care necessary.

I desire to acknowledge my indebtedness in the preparation of this paper to articles by Dr. J. W. Babcock, Dr. F. G. Crookshank, Dr. David Blair and to the superintendents of the hospitals who answered my inquiries.

DISCUSSION.

Dr. G. H. HILL: There is a great variance in the percentage of deaths caused by diseases other than tuberculosis in institutions in different parts of the country. In the institutions in Iowa, for instance, the percentage of deaths from general paralysis is small, and consequently the percentage of deaths from tuberculosis there would be larger. I am of the opinion, too, that when post-mortem examinations are faithfully made in every case of death in hospitals for the insane, that the statistics will show a larger proportion of deaths from pulmonary tuberculosis than when the causes of death are recorded without such examinations having been made. I know in our institution we put down as the immediate cause of death tuberculosis in some cases of general paralysis, for example, or of senile dementia, or of some other chronic condition in which there is perhaps inanition, or in which there

is profound melancholia and lowering of the vitality of the patient so that he is bound to die anyway from general debility. But when we find tuberculosis at the autopsy we do not say that the patient died from melancholia, or from exhaustion, because it is more definite to give tuberculosis as the cause of death than the general condition of the body before death. One thing which will cause a variation in the reports in regard to the condition of the patients when they are admitted to the hospital, as to the lungs and other organs, is the matter of making a thorough physical examination at that time, so that the members of the medical staff can say positively whether or not the patients bring tuberculosis into the institution or acquire it while there. I mention this incidentally to show the desirability, when making statistics, of knowing the condition of all of the patient's organs at the time they enter the institution. Insane persons, who have pulmonary tuberculosis, seldom expectorate until late in the course of the disease, even though there is a discharge from the lungs. In many instances the discharge is swallowed and passes into the alimentary canal instead of being expectorated. If we cannot have separate buildings for tuberculous cases, if we cannot even have a separate ward for such patients, I think the greatest precaution to be used is to collect, or somehow take care of the expectoration. When patients with tuberculosis are not distributing the bacilli in any other way, they may mingle with other patients, possibly play euchre and lick their thumbs in dealing the cards. If we know a patient has tuberculosis he should be watched and managed accordingly. In some cases we can collect the expectoration very successfully in spit cups, or upon handkerchiefs or napkins, so that it can be properly disposed of. The expectoration should be burned. The clothes containing the discharges from the lungs should not be washed or thrown about, but consumed as soon as possible. The worst cases I have to deal with are tuberculous patients who are totally demented, or are contrary in their dispositions, or are reckless in the manner of disposing of the expectoration, spitting upon the wall, or upon the floor, or upon the bedclothes, and refusing to spit where the nurse and the physician desire to have the expectoration deposited. In all such cases I manage, as far as I can, to have particular rooms in the infirmary wards set apart to tubercular cases who are bedridden, or who are invalids and refuse to expectorate in such a manner that we can collect the sputum and destroy it.

Dr. WISE: Without taking up the time of the Association with prolonged discussion, I think it will be proper for me to mention at least an experience at the St. Lawrence Hospital. We are all indebted to the doctor for the effort he has made, and the excellent way he has boiled down the data of the experience of the hospitals of the United States. St. Lawrence was occupied at first chiefly by receiving transfers from other hospitals of New York, many of the patients, of course, having tuberculosis. It was noticed, however, during the first year, that the deaths from tuberculosis were almost nil. I think there were two the first year, although there was a population of nearly 800. This was difficult to explain, unless it was by the fact that the new buildings, which had a very large cubic space, and in which the air was moved with comparatively great rapidity—at that time it was not crowded—produced hygienic conditions which kept the disease from progressing. An-

other feature was that patients in whom, on admission, the prognosis was very favorable showed great improvement, and in several cases that died from other diseases than tuberculosis, although on admission the physical signs were unmistakable, it was found on the autopsical examination that the lungs were cicatrizing, or entirely healed, and the cavities were contracted and dry. As the institution is getting older the proportion of consumptive cases is increasing.

Dr. TOMLINSON: I do not think there can be any question with regard to the value of Dr. Harrington's paper. It covers the ground very thoroughly and there is practically nothing more to be said from the standpoint he discusses. I desire, however, to call attention to another aspect of the subject which I do not think has been sufficiently emphasized, possibly because in the doctor's experience it has not been very prominent; that is the relation between overcrowding and the increase of tuberculosis in public institutions for the insane. In my experience the two practically always go together; and even if provision is made for the isolation of these cases quite early in the history of the disease, if the overcrowding is not relieved, the isolation building will be constantly recruited from the other wards of the hospital. We have frequently had cases presenting in their clinical history very little evidence of tuberculosis and only the pus forming bacteria found in the sputa; yet in post mortems the tubercle bacillus was found in the bronchial glands and lung tissue. So there is probably constantly present in the wards the means of insidiously spreading the infection. Again we have taken scrapings from the floor and walls of the overcrowded wards and obtained cultures of the tubercle bacillus in abundance, then thoroughly cleaned the walls and floor, taken other scrapings and found them sterile. Afterward, in the course of six weeks, scrapings from these same walls have again given cultures of the tubercle bacillus. While there is undoubted advantage in the provision of isolation wards for this class of patients, I do not believe that tuberculosis will be eliminated from our hospitals until the overcrowding is done away with. Between 1893 and 1895, at St. Peter, we had very few deaths from tuberculosis; while from 1895 to 1898, when the hospital was very badly overcrowded, tuberculosis was responsible for approximately 40% of the deaths.

Since that time we have not been so badly overcrowded and have made provision for the separate care of recognized cases of tuberculosis, although we do not have a properly equipped isolation ward. Our mortality during the past two years from tuberculosis has only been about 10% of the total number of deaths. The source of infection is still with us, however, and we are able from our past experience to predict, almost certainly, that certain people coming into the hospital will surely become infected and die of tuberculosis.

THE STUDY OF A YEAR'S STATISTICS.

By Chas. W. Pilgrim, M. D.,

Superintendent Hudson River State Hospital, Poughkeepsie, N. Y.

As the value of statistical studies depends altogether upon their accuracy, it has occurred to me that the study of a year's statistics, with all the data fresh in mind, might be of as much interest and value as references to a much larger number of cases where many interesting points are apt to be lost sight of through lack of familiarity with the histories. I therefore present the results of an examination of the statistics of the Hudson River State Hospital for the year ending September 30, 1899:

There were 522 admissions, of which number 504 were upon original commitments, while 18 were transfers from other institutions for the insane. An examination of these cases shows the following facts: 41.5% presented symptoms of melancholia, 32.5%, symptoms of mania, 20% were cases of dementia, and 6% were general paretics. The proportion of cases of melancholia compared with those of mania is greater than is usually given by writers upon this subject. In fact, most English authorities reverse these figures and accord the higher percentage to mania. Tuke, in his Dictionary of Psychological Medicine, quoting from the Forty-third Report of the Commissioners in Lunacy, gives 49.1% to mania and 24.9% to melancholia. He also quotes from Dr. Boyd's table, which gives even a lower percentage to melancholia, but adds: "From a large number of asylum returns which we threw together some years ago, melancholia appeared to be much more frequent than in Dr. Boyd's table." Clouston states that 55% of the admissions to the Royal Edinburgh Asylum during a period of six years were classified as mania, while only 34% were diagnosed as melancholia. In my recent reading on the subject I have found only two writers who place melancholia

first in frequency. Kirchhoff, in his "Handbook of Insanity," says that mania appears to be a less frequent disease than melancholia; and Dr. David Blair of Lancaster, in an article on "The Treatment of the Phthisical Insane,"* says that melancholia affects forty per cent. of the insane and mania thirty per cent., a statement that comes very close to the figures which I have presented. In order to satisfy myself that my figures were correct, I examined the table giving the forms of insanity upon admission in all the hospitals in the State of New York for the year ending September 30, 1898, and found, by excluding the transfers of terminal dements from one institution to another, that the cases diagnosed as melancholia made up a little more than 40% of the original admissions, while those diagnosed as mania fell a little short of 29%. I am certain, therefore, that the ideas which we have heretofore held in regard to the frequency of these two forms of insanity must be changed, at least so far as the State of New York is concerned.

Of the year's admissions 66 were sent home during the year as recovered; 19 as improved; 2 as not insane, and 60 died. Of those remaining at the end of the year, 87 will probably recover, 44 will probably improve, while 230 present no favorable symptoms whatever and will in all probability remain insane until death. We see, therefore, that about 30% of those admitted either recovered during the year or still have some chance to recover; 12% were either discharged as improved or will probably improve; 11% died, and 47% were chronic when admitted and will remain insane until they die.

One hundred and two cases, or nearly 20% of the admissions during the year, owed their insanity to moral causes—to mental strain and worry due to loss of friends, business and family troubles, religious excitement, etc. These causes, as might be expected, were more frequent, by nearly 50%, in the women than in the men.

Seventy-five patients, nearly all of whom were men, became insane from the excessive use of alcohol; 21, nearly all of whom were women, were victims of some drug habit; while 33, nearly all of whom were men, owed their insanity to immorality of one kind or another. At the first glance it would seem that in nearly

*The Journal of Mental Science, April, 1900.

25% of all the admissions the insanity might have been prevented by better methods of living, but it should be remembered that many of those who fell by the way owed their fall not so much to deliberate wrong-doing as to their inherited nervous instability, for which they were in no way to blame. Without this hereditary weakness and predisposition to insanity they would probably have escaped this awful penalty for their lack of self-control, as thousands of others do.

One hundred and ninety-seven of those admitted—77 men and 120 women, or about 33% of the total number—became insane from purely physical causes, such as diseases of the various organs, injuries, or physiological crises. Such causes, especially those of physiological origin, are of much greater frequency in women than in men. Fourteen cases were due to congenital defect; in 29 cases no cause could be ascertained, and 3 were not insane, but were simply victims of vicious habits. In 48 cases heredity was given as the sole cause, while in 122 others an inherited predisposition existed. Nearly one-third of the patients, therefore, started life heavily handicapped by the heritage of an insane diathesis.

Among the acute cases admitted, 175, or nearly 33.5%, were instances of melancholia, while 70 (13%) were cases of mania. The relation between these two kinds of insanity in the chronic form was just the reverse, the percentages being respectively 8 and 19.5. The number of cases diagnosed upon admission as acute melancholia, which is just about two and one-half times as great as that of acute mania, is quite suggestive. It not only proves, as is generally admitted by alienists, that it is the rule for insanity to begin with depression, but it also shows that cases are sent to the hospital much earlier than they used to be. It is evident, therefore, that admissions nowadays must show a preponderance of cases of mental depression, inasmuch as many patients are received before the later stage of mania has had time to develop. It is undoubtedly this fact which so often gives rise to the assertion that the form of insanity has changed of late and that the terribly troublesome cases of former years, in which restraint seemed so necessary, are no longer seen. But it is my belief that the real reason for the infrequency of such cases is that hospitals for the insane are to-day regarded much more favorably than they were even a decade ago, and their aid is

much earlier sought and their full benefits much oftener obtained. As Clouston says—"Admissions to hospitals for the insane will increase for many years to come, not from any positive increase of insanity at all, but from a more extended realization by society, of every grade, of the benefit and convenience of such hospitals. It is getting better understood that many forms of mental disease are just morbid accentuations of natural disposition; in one case temper shading off into mania; in another, keen sensitiveness of feeling passing into melancholia; and in a third suspiciousness verging into insane delusions, so that the subjects of such changes become unfit for family or social life. The extreme difficulty of treating such mental and morbid accentuations—the misery and family confusion caused by them, the risks of every kind run through them—all suggest the relief and safety of a well-appointed hospital in more and more cases. The world is getting too busy to be able to attend to its mental breakdowns at home, and it is getting more and more intolerant of very marked divergences from social order, and even of neglect of the conventionalities of life." And it is fortunate for the hospital, the patient and the community at large that such views can be advanced.

Upon examining the 501 discharges for the year, which include 340 cases admitted in previous years, we notice a remarkable similarity between the results of the previous year and those which we expect from the admissions of the past year; for 42% were sent home either cured or improved, which is exactly what we expect from the admissions of the year which we are examining. Of course some among the 42% sent home will relapse and have to be returned; some of those now classed as recoverable or capable of improvement will fail to bear out the present favorable prognosis, and many of those classed as chronic will die within a few years, so that in the end the results will probably correspond very closely with those obtained by Sir Arthur Mitchell, who followed the life-histories of nearly 1,300 patients admitted into Scottish asylums. The results after twelve years were as follows: 68.3% were either living and insane or had died insane, and 31.7% were still living and sane or had died sane. It was his opinion that 4.7% of those sane at the end of twelve years would relapse and die insane, thus leaving 27% of the persons admitted likely to die sane. As is well known, the statistics for

England and Scotland appear better than they do with us, by reason of the fact that old and senile cases are sent to the work-house instead of to the asylum. In the State of New York there is no such provision for what might be called physiological cases and they must all be sent to State hospitals. The recovery rate of 24.21% which we are able to show for the year is, therefore, as good as could be expected where all kinds of cases, including the senile and defective, are admitted.

An examination of the statistics for the first twenty-five years of the existence of the Hudson River State Hospital shows that there has been a marked increase in the recovery rate during the past few years. From 1871, when the hospital was opened, to the close of the fiscal year of 1896, the recovery rate amounted to a little more than 21% of the admissions; 11.5% were discharged improved, thus making about 33% who were returned to their homes; while the records for the year which we have under examination show an increase over these figures of 9%. Of course the well-known fact that the recovery rate is low during the early years of a hospital's life, on account of the transfer of chronic cases from other institutions, must be taken into consideration, but despite this fact I think it can be safely asserted that the present methods of management and treatment are better calculated than the older methods to bring about recovery in favorable cases, as well as to make happier and more useful the lives of the less fortunate ones in whom recovery cannot be expected.

As previously stated, the recovery rate, based upon the original admissions, was 24.21%. Of the 122 patients discharged as recovered, 110 were placed under hospital treatment within a year of the commencement of the disease, while only 12 recovered where hospital treatment had been delayed beyond that time. These figures more than bear out the statement which I made some years ago, from a study of the statistics relating to the subject that the chances for recovery are eight times as good when hospital treatment is begun within a year, as they are where it is postponed for a longer period. To appreciate more fully the advantages of early treatment and the rapidity with which the chances for recovery decrease with every month's delay, it is but necessary to note that of the 110 patients who recovered, 80 were sent to the hospital within three months of the

beginning of the disease, 17 in from three to six months, 11 in from six to nine months, and 2 in from nine to twelve months. Surely no argument for early treatment could be stronger than these simple figures. Another interesting point in this connection is the fact that 99 of the recoveries occurred within a year after admission. This bears out the fact, which is well known to the alienist, that where recovery is delayed beyond a year the chances for complete restoration are only about one-fourth as good as they were before the expiration of that time. In order, however, that a too discouraging view may not be taken, it should be remembered that recoveries do occur under less favorable conditions. Eight of our year's recoveries had been insane for from two to five years before coming to us, and nine were with us for from two to five years before recovery took place. In the light of such statistics it is well to be conservative in regard to prognosis, for in most cases of insanity, as in other diseases, "while there is life there is hope."

In addition to those patients who were completely cured, 61 were so far improved that they were returned to their homes, and in some cases resumed their occupations as wage-earners, and three were victims of the drug or liquor habit and were discharged as "not insane." Our records, therefore, show that more than 42% of those discharged, exclusive of the transfers to other institutions, were restored to home and friends.

The effect which the age of the patient has upon prognosis is well shown by an examination of the ages of those who recovered during the year: Forty-one were under thirty, 59 were between thirty and fifty, and only 21 were more than fifty years of age. These figures show, therefore, that recovery occurs five times as often where the patient is under fifty years as it does when he has passed that age and begins to "go down the slant of life." Of equal interest from an ætiological standpoint is the study of the ages of those admitted, which shows that only 15 were under twenty and 159 over fifty; while 348, or 67%, were between the ages of twenty and fifty. These figures only emphasize the well-known fact that insanity is a disease of the active period of life.

The seasons of the year certainly have some effect upon the admissions and perhaps also upon the outbreak of insanity. The admissions during the summer and winter months were in

the proportion of 54% to 46%, while the months of May, June and July show a steady rise and an excess of 20% over the admissions during any other quarter of the year.

There can be no reasonable doubt that the seasons exert a marked influence upon the recovery rate, for 65% of those who recovered were sent home during the months of spring and summer, while only 35% were so discharged during the autumn and winter months. Regis makes the statement that melancholia is aggravated in the winter, and that but few cases of mania recover during that season. It is easy to believe that the fresh air, the sunlight, and the out-door life of summer must act as powerful agents in helping to restore the diseased brain to its normal condition.

The total of deaths during the year was 231; of this number 116 were men and 115 were women, forming together a little more than 11% of the average number under treatment. This is somewhat higher than the usual rate and is explained by the fact that more than 22% of the deaths among the men occurred within one month after admission. Over one-third of those who died within this period were beyond seventy years of age, while the other two-thirds were around middle life and succumbed to acute intercurrent diseases—due principally to lives of exposure and the abuse of alcohol. This fact bears out the statement made by Clouston that “men and women as they approach middle life should be more careful of alcohol, of excesses, of avoiding the causes of rheumatism, gout, bronchitis and other diseases, because their diminishing nerve energy will no longer combat successfully those enemies of health, and they succumb for want of nerve energy to what a few years before they would have resisted with apparent impunity.”

Owing to the fact that such a large number of deaths occurred shortly after admission, the average duration of insane life for the year was reduced to 7.1 years. An examination of the statistics since 1888, when our present methods of tabulation went into effect, shows that it was 10.8 for men and 13.4 for women, making a general average of 12.1 years. In basing calculations upon the probable duration of life in the insane, twelve years has generally been taken as the probable period, and our statistics bear out the accuracy of this practice to a remarkable degree. They also confirm the well-known fact that the insane

life is about one-third longer in women than it is in men, due not only to the greater tenacity of life in women but to the fact that they suffer less than men from the more fatal forms of insanity. For these same reasons the chances for recovery are always better in women than in men.

As might have been expected, the largest number of deaths took place during the winter and spring months, 61% having occurred between October and April, and only 39% between April and October. The majority of the deaths during the winter months, aside from those due to general paresis, were caused by acute diseases of the air passages or of the intestinal tract, while those which occurred during the summer months were due to the exhaustion following diseases of the brain or lungs, or to the natural debility of old age. The disease claiming the greatest number of victims was general paresis, and it occurred just four times oftener in men than it did in women. Tuberculosis ranked next in frequency, but here the conditions were reversed and women suffered from it somewhat oftener than men.

An examination of "the hour of death" showed that 26% died between midnight and 6 a. m., 19% between 6 a. m. and noon, 31% between noon and 6 p. m., and 24% between 6 p. m. and midnight. By adding these percentages together we find the curious fact that the deaths were very evenly distributed between the hours of darkness and light, 115 patients having died between 6 p. m. and 6 a. m., and 116 between 6 a. m. and 6 p. m. Desiring to pursue this question still further, I examined the deaths for the ten preceding years, nearly 1,500 in all, and found this statement strikingly confirmed, as a change of one-half of one per cent. would have made the deaths exactly even during the hours of day and night. A chart which I made of the deaths for the year—and I might also add that the statements which I am about to make were corroborated by a chart made of all the deaths during the preceding decade—showed, when divided into sections of three hours each, that the highest point of the curve was reached, both for men and women, between the hours of 3 and 6 p. m., nearly 20% of all the deaths having occurred between those hours. The next highest point was between the hours of 3 and 6 a. m., although there was a decided fall for both sexes for the single hour from four to five, when the line went down to the lowest point reached in any hour of the twenty-

four. There was also a decided fall, especially for women, between eleven and twelve in the morning, which is in direct contrast to the statement made by Dr. Beadles of Colney Hatch, that the most fatal hour for women is shortly before noon. For the other hours the recording line remained remarkably steady for both men and women. These figures, therefore, show that there is some reason for the popular belief that many deaths occur during the early morning hours, but they show still more plainly that the majority of those who suffer from long continued mental disease give up their lives toward the close of day. As a general rule "death softly follows life" and suffering at the end, either physical or mental, is of rare occurrence. In fact, it is not an uncommon thing to notice a clearing up of the clouded brain a few hours before the final change. This fact was noticed by Rush a hundred years ago and, in my opinion, too little has been written of it since. From my own observations, and from the reports of reliable nurses, many patients, especially those dying of phthisis, or after surgical operations, or from acute intercurrent diseases, or injuries which produce a profound shock upon the general system, become calm and coherent shortly before death. This may be accounted for either upon the theory of counter-irritation or on the principle enunciated by Claude Bernard that when a histological element dies or tends to die, its irritability augments before it is diminished. Of course, this temporary brightening does not often occur in cases of terminal dementia or in general paresis where there are profound changes in the structure of the brain, but I am convinced that it is not rare for the melancholy or maniacal insane, as good old Dr. Rush observed, "to discover a greater or less degree of reason in their last hours, just as the sun, after a cloudy day, sometimes darts a few splendid rays across the earth before he descends below the horizon."

DISCUSSION.

Dr. BURR: I, for one, feel deeply indebted to the Doctor for this paper. He answers questions we are asked daily. We do not have papers of this sort often enough. What an invaluable volume a collection of such papers, given to the Association each year, would be. I feel like moving a vote of thanks for the work the essayist has done, but will content myself with expressing my appreciation of it.

Dr. WISE: The Doctor has shown us what important conclusions and suggestions may be drawn from statistics. We have all, especially the older ones of us, noticed the changes in insanity and especially in the ordinary classified forms. In my work as commissioner in lunacy I examine about 4,000 cases annually and the changes in manifestations of some forms of insanity has particularly impressed me. One form of insanity in particular in which the symptomatic change has been very noticeable has been general paresis. It is now rather exceptional to find a typical old-fashioned text-book case such as was described by the authors twenty or twenty-five years ago. The delusions of grandeur are disappearing, or are exceptional, and when they are met attract attention. There is a larger proportion of cases showing dementia only as the mental change. I notice many cases in which there is depression, and I think such cases are increasing in number. I understood Dr. Pilgrim to say that in 29 patients, nearly *all* of whom were women, insanity was due to uterine or ovarian trouble. I hope so.

Dr. RICHARDSON: I feel personally very much indebted indeed to Dr. Pilgrim for the presentation of the paper at this time because it brings into sharp contrast the results and the statistics arising from the treatment of a general class with what I want to present this afternoon in the treatment of a special class, to-wit, those becoming insane during the Spanish-American war and the Cuban campaign. I reserve any comparison until after the paper is read this afternoon, but I particularly want to inquire of the Doctor if he could tell me the proportion of cases of alcoholism among males and what proportion of the patients was male.

Answer: I mentioned 75 cases, nearly all of whom were men who became insane through the use of alcohol.

Dr. RICHARDSON: There is quite a difference shown between the proportions of cases among the various divisions of military service and that difference is in favor of the army. As divided between the Porto Rican, the Philippine and the Cuban campaigns and the navy, it was much better in the army.

Dr. WORCESTER: It seems to me this paper of the Doctor's, and that of Dr. Sprague, illustrate somewhat the differences in point of view of the writers. Dr. Pilgrim does not accept the idea of a primary dementia, at least I understood that all the cases he classified as dementia were chronic cases, cases that had endured for a considerable time. Now, I will only say in regard to the matter of curability of insanity, that I have become more and more suspicious of the ground which used to be almost universally maintained by writers on the subject, that early treatment is the most important thing, and the general assumption that if all cases could be treated early enough they would all recover. I got a little light upon that subject years ago when I was an assistant physician in the Michigan Asylum. The asylum became very much overcrowded at one time, and the trustees decided to receive patients only as vacancies occurred, and the plan was adopted of giving preference to acute cases. We kept a list of waiting cases and when a vacancy occurred we would write for the acute case of the longest standing. In a large proportion of those cases we would get the report that the case

had already recovered. One reason, I have no doubt, that Dr. Pilgrim's cases that did not recover had reported a longer duration of their insanity than those in which recovery took place was because the large proportion of cases of acute insanity which might have been properly sent to the institution never were sent there but recovered at home. On the other hand, in the case of those that were insane for a considerable length of time their families became tired of taking care of them, despaired of their recovery and decided then to send them to the institution, I have found it very frequent with all the institutions with which I have been connected that we receive cases in a very few days after the beginning of their mental disturbance, and those cases go on to dementia in spite of everything we can do. We, at Danvers, have come to believe that, in many cases, we can tell whether or not they will go on to dementia. The principal benefit of this classification into primary dementia or dementia præcox is that it sets us to studying the symptoms and trying to find out whether there are any data by which we can tell the outcome. Instead of dumping them among the cases of mania or melancholia, just as they happen to be elated or depressed at the moment of admission.

Dr. BRUSH: It seems to me the result varies much with the point of view, but the sooner a case is placed under proper treatment the more likely that case will get well. In many cases if we were to try to determine their curability upon the duration alone we would place them in a very chronic class and possibly despair of their getting well. Other things being equal, I hold that the recoverable psychoses are much more recoverable during, say, the first six months of the attack, if placed under appropriate care, than if left at home for a year.

Dr. EVANS: The Doctor says we must change our ideas, especially as far as New York is concerned, and I, for one, have had to do that for New York a number of times, and I am willing to do so again, for it has always been for the better. So far as the institution with which I am connected is concerned, the melancholias have always been in the majority. My reports will show that. This, of course, is modified by the peculiar environments of the patients and the occupations of the patients who are admitted in any particular institution, and also the locality. Certainly I would have been pleased to hear how far that matter of melancholias being in the majority, obtains in other institutions than those of the great State of New York and her little sister across the river.

There is just one other thing, Mr. President, that may be a little out of order, but I hope you will bear with me inasmuch as I have not bothered the Society much at this meeting. Dr. Brush asked the right to read his paper by title and begged the privilege to change the name of this offspring. Now, I think the Society has a right to know what the name of the baby will be. We do not know the mother, but we have no doubt that this will be a well developed and beautiful child if it is to resemble the father. It undoubtedly will show the pleasing characteristics of the father and the masterful touch of his hand, but I think, with all due deference to Dr. Brush, we should know what the child shall be named.

ARE THERE ANY CONDITIONS WHICH WOULD WAR-
RANT THE TAKING OF LIFE BECAUSE OF
INCURABLE MENTAL DISEASE
OR DEFECT?

*By Richard Dewey, M. D.,
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It is proposed of late, with increasing frequency, by sociological writers and thinkers that practices known in ancient times and always more or less in use by savage races, whereby the diseased and defective are removed by death, be revived and enlarged in their scope and applied to the conditions of the present.

Not only should the death penalty, according to such theorists, be more extensively inflicted upon criminals but the victims of incurable insanity and idiocy should be exterminated in some manner not painful or revolting to our æsthetic feelings.

In conversation, one often hears this proposal advanced, when the increase of crime and insanity and imbecility is under discussion—and in truth, one cannot wonder that the increase of these anti-social elements in our communities seems to many to call for better remedies than have yet been devised, and leads to some wild proposals; for no one can deny that there is great reason for anxiety in the constantly increasing numbers of the incompetent and injurious classes. I shall not here repeat the too familiar tale but only seek to briefly discuss the practicability of applying such a theory as that above-mentioned to the incurably insane and idiotic, and to inquire—Is there a warrant in reason or justice for the extermination by death of such persons?

The first consideration in such an inquiry would be, Do the rights of such persons differ from the rights of others? Equality before the law is guaranteed to all. Only universally applica-

ble principles can be admitted. There is now an established procedure of taking life for certain capital crimes,* although some of the States of the Union do not admit the death penalty, and although there is some enlightened opposition to it, and although in those cases where it is ordered by the courts it frequently fails of enforcement.† But if we grant the death penalty is justly applicable to certain crimes, we may even increase or diminish its scope in the case of crime, but we are still in no position to apply it to disease or defect. We must ask whether there is any diseased or defective state which would justify the infliction of death. This would be a new reason for the death penalty, depending upon a new principle hitherto unrecognized, and its enforcement would require an amendment to our fundamental law. Is there any good to the community or to the individual sufficient to warrant the death penalty in cases of mental disease, or defect?‡

Killing an individual for his own good has never yet been sanctioned, although we see cases in which in putting an end to great suffering, where death is inevitable, we can believe no moral wrong would be done. But even such an end is condemned by law and by consensus of opinion, because the dangers which surround any process of taking human life are so great. Furthermore, even suicide of an individual under the same circumstances would be regarded by the law in our time and country as quasi-criminal, and in ethics, immoral.

It may be claimed that life, liberty, property and the pursuit of happiness are of no value to the incurably insane and idiotic, but large numbers of such find, as we know, practically a satisfaction and happiness of their own in life. In fact, many of the hopelessly insane, and even of the incurably idiotic, lead a happy existence, as all familiar with these matters know. While on the other hand, we know of thousands upon thousands of

* I do not here consider the cases where insane or idiotic persons are charged with capital crimes, for in this discussion we have nothing to do with criminal law.

† The percentage of cases in which the death penalty is enforced after being ordered by the courts varies in civilized countries from 20 to 50 but is nowhere higher than the latter figure.—*McKim*, p. 275.

‡ It would require too much time and space to consider here disease in general;—*bodily and mental*, and lead too far afield.

normal persons to whom life has no value, and if we are not ready to kill all persons of every sort to whom life is of no value, we cannot consistently kill the idiot or insane for this reason. Next, if we are ready to enlarge the scope of the death penalty and apply it to non-criminal persons, e. g., idiots and incurably insane, because this will *benefit the community*, or because of the injury such persons do to the community, we must take *all* whose death would be an advantage to the community and kill them for the same reason; not idiots and insane persons alone, but the far more dangerous and harmful persons possessed of wits which they use for evil purposes. The evil done by all the idiots and all the incurably insane (even including the propagation of their kind), is as nothing to that wrought in the world by those from the earliest times to this day—like Nero, Ivan the Terrible, Napoleon and other despots and warriors. Some of these we now regard as having been insane, but if there had been in their day a law justifying the “asphyxiation” of the incurably insane, it would never have touched them, and the evil done to-day by such sane persons as Fuller, of “get rich quick” fame, by embezzling savings, bank officers, corruptionists, criminally careless tenement-house proprietors and unjust judges, whom no law can reach, both to the present and succeeding generations, overshadows the wildest imaginings of the mischief from insane or idiotic persons. It is known that feeble-minded young girls and women not infrequently become the mothers of illegitimate children, and that the other parent is a person possessing all the outward attributes and privileges of citizenship and mental integrity as recognized by the law, but if the death penalty is to be employed in such a case how much more is it deserved by the one supposed to be *compos mentis* than by the one who is merely unfortunate and irresponsible! It may be claimed that this last argument is not wholly sound or applicable to the case, but it has its force. Now if we grant, for the sake of argument, that idiocy and incurable insanity are in themselves a reason for the death penalty—and that we have suitably amended the constitution—the next step is a legal definition of idiocy and incurable insanity on which all can agree.

First, in the case of idiocy, can characteristics and degrees be defined which would be unmistakable? Taking the physical

conformation, in the first place, are there any sure physical indications of hopeless idiocy? A moment's reflection will satisfy us that there are not because the highest degrees of idiocy are sometimes associated with symmetrical and nearly perfect outward bodily form; also because the extremes of physical deformity often found in the lowest idiots can be paralleled and even excelled in individuals of normal mental character. The "stigmata" are not yet placed in any definite relation to the mental state and it is not certain they can be.

Next as to the *mental* state of idiots. Idiocy, like insanity, is subject to as indefinable gradations as those from darkness to dawn. There are no fixed lines that can be established and recognized by statute law, and if definitions were made no two doctors would agree as to their application.

All I have said above can be repeated and even more strongly emphasized in the care of incurably insane persons. It is well known that a satisfactory definition of insanity has never been framed and *a fortiori* of incurable insanity.

Murder is a thing that can be clearly defined, yet even about that the difference of opinion in the minds of juries on hearing sworn evidence is become a proverb. The *mental* state of the murderer is even more inscrutable and to define a kind and degree of mental disease that will warrant gentle removal from this life by "asphyxiation" is, in my opinion, a task beyond the wit of man.

Much of the above has been suggested to me by a cursory reading of a book upon "Heredity and Human Progress," by W. D. McKim, M. D., Ph. D., in which Dr. McKim advocates the painless removal of criminals and hopelessly insane and idiotic persons.

This author states (p. 184): "Poverty, disease and crime are traceable to one fundamental cause—*depraved heredity*," and in order that these may not be perpetuated, McKim's proposal is the extermination, by gentle means, of incurable and hopeless victims of poverty, disease and crime as are found in the public custody.

Now, the claim that poverty, disease and crime are all traceable to depraved heredity is a violent assumption. Environment, which has surely as much to do with it, is overlooked, as also the poverty, disease and crime, which are *not inherited*,

which form, certainly, no inconsiderable part of the whole. It is possible that the exchange of a good environment for a bad one in early life would effectually cure a large proportion of poverty, disease and crime. The environment must be conceded to have as much to do in the result as the heredity, but granting that a preponderance of poverty, disease and crime is inherited, are we justified in taking life to prevent evil in inheritance, especially when we know that so far as the insane are concerned (even the incurably insane of the paranoiac type), there is among their offspring a certain proportion of healthy persons, and some brilliant and valuable genius and talent. McKim says that we are unnecessarily particular about taking life in a judicial way. He alleges that death is in many ways improperly comprehended. He states the fear of death is a habit of thought merely, and like other habits, may be overcome; (though with most of us it is to be feared this "habit" is so fixed as to be incurable). He also argues that death is not disagreeable, as a rule, when it finally comes, and our *apprehension* is the thing from which we suffer; but even if it be the fear of death that troubles us, still knowing we shall die an easy death does not help matters very much. He also shows how regardless nature is of life, human and animal, but he does not prove we should be careless about death because nature is. He also shows there are other things more precious than life, especially from the Christian standpoint, but this, too, seems to have no bearing on his remedy for human degeneracy.

His plan is to "eliminate" largely the classes referred to, the defectives thrown upon the State for maintenance and the vicious (or criminal) held in restraint. It would be the "very weak" and the "very vicious" that he would select for extermination. They should be only the "dependent ones found in public custody, the idiots, the incurably insane and the most heinous criminals, most epileptic persons, also habitual drunkards—weighing carefully chances of cure and reformation of the latter. (Even the reformed drunkard might be very dangerous, however, "as a parent.") For some the doctor's prescription would be "immediate extinction," for others a period of probation.

And all this would be for the purpose of giving all altruistic persons a chance to enjoy themselves together on this earth.

Their altruism being strictly expended on each other in mutual keeping of one another alive and mutual "gentle" removal of the "very weak" and the "very vicious." It would seem practicable, perhaps, to have three classes of each, "the very," "the very very" and "the very very very," with corresponding degrees of probation, and nicely graduated and adapted machinery of removal.

McKim further states it is not possible to draw the line between the very weak and the very vicious, and "if we halt in the matter, it is simply because of unreasonable sentiment," (p. —). Our author, at least, is not a sentimentalist. He would simply ask that those in whom good predominates should live, the rest should die,—the death being administered not as a punishment but to make the world better, as it is impossible to measure the responsibility of any individual. He thinks an exaggerated value is set on human life at present and this is an obstacle to progress.

It is my opinion that no policy proposing to abridge fundamental rights can expect favor with the people unless unmistakably disastrous consequences are immediately deducible from the exercise of this right. We have come gradually to a point where sanitary laws for the general welfare are enacted and enforced, and it may be expected that *mental sanitation* will come to receive greater and greater attention, but it may be safely doubted whether any law will ever be enforced which inflicts death on irresponsible persons who have committed no crime.

Until the laws of heredity are more clearly understood than at present, and until we have absolutely accurate landmarks for defining idiocy and incurable insanity, no legislation of any practical value can be obtained. It must first be proven that wise bringing up and education are powerless to remedy mental defect and disease before anything more radical will be approved by the community.

McKim quotes Herbert Spencer's dictum "There is no greater curse to posterity than that of bequeathing them an increasing population of imbeciles and idlers and criminals. To aid the bad in multiplying is, in effect, the same as maliciously providing for our descendants a larger host of enemies." He claims we can treat certain beings as outside the pale of human society. This may be true of a certain proportion of adult, hardened

criminals, but it is too much to claim that it can be predicted of children or of idiotic or insane persons. These are a charge upon society, and the wise and humane caring for them is one of the noblest exercises of human philanthropy: an object lesson improving and uplifting to the society which provides for it; to all the agents employed in it provided they are suitably chosen and suitably supervised, and to the unfortunates themselves.

The community will not be satisfied to try "asphyxiation" until the complete carrying out of the gospel has failed, and this we must remember has as yet only been imperfectly done. How great are the short-comings of even the best work we all know. On the other hand the killing-off process has been going on for centuries—not systematically, it is true, but the same result has come from the cruel, brutal and neglectful methods of the past, in prisons, alms-houses and asylums, which have only brutalized the more all participating in them, whether as sinners or sinned against.

The State cannot afford to do evil even with the intention that good may come.

Life is more and more worth having and it seems to me it is the task of the State, instead of depriving any of life, to make life valuable to all. At the same time there is no one who can utter an infallible dictum on the subject. By all means let the theories of McKim and of all reformers be fully discussed, carefully brought to the attention of the people, and in the end wisdom and justice will prevail. It is my belief that legal executions of victims of any disease will never be authorized.

In closing I may epitomize the line of thought here presented as follows:

Those who wish to establish any method of "euthanasia" or judicial execution of victims of incurable mental defect or disease, have the following task before them: First—They must establish a new principle to the satisfaction of the people as a whole, and secure changes in the organic law giving legal force and effect thereto. This principle would be embodied in the declaration that life may be taken judicially for other causes than crime, and in particular, that judicial execution may be inflicted upon those afflicted with incurable idiocy or insanity. In other words it must be proved that such persons have not the

same right to live that others have, or even the same right as victims of other incurable diseases, e. g., phthisis or leprosy.

Second—The reasons that can be given for treating the incurably idiotic or insane as not having the same right to live as others will be either that the life and propagation of such persons is so injurious to the commonwealth, as a whole, that the evils connected with destroying them judicially (in a comfortable manner), is less than the evil of letting them live, or, on the other hand, it must be proved that life is of no value, or of less than none, to such persons.

If the first reason be accepted, its application must be *universal* and *all* persons whose lives are equally or more injurious to the community than those of the incurably insane and idiotic, whether sound or unsound mentally, must be judicially removed (in a comfortable manner).

If the second reason be accepted, again, it must be made *universal* in its application, and *all* persons whose lives are of no value to themselves, must be judicially executed (in a comfortable manner).

Incidentally, all the evils growing out of placing less value than heretofore upon human life must be considered.

Finally, a criterion must be established which will be capable of *application* and enforcement as to *what constitutes incurable idiocy and insanity within the meaning of the law*.

Last, but not least, it must be reasonably certain that a new population of defectives would not continually confront the commonwealth, springing from the loins of those remaining after all had been removed who were unable to escape the newly proposed penalty attaching to incurable insanity and idiocy.

DISCUSSION.

Dr. RUNGE: This paper, perhaps, is of greater interest than the Doctor's views, for such a proposition we doubtless have all met with among the laity, although in general it is one we never meet with among physicians. To us, as physicians, life is the most sacred thing. I do not believe any physician, whether here, or in China, or anywhere else, could be found who would take life. But among the laity such individuals will be found, even among the higher classes. I have had men connected with universities state that the State should have the right to take the life of those who are a burden to us, and especially of the incurable insane. Such a proposition simply brought the creeps over me. It brought me face to face with conditions

which may have been normal two or three thousand years ago, but they were not normal when the great Father of Medicine, Hippocrates, lived, for he would have been the last to make such a recommendation. Whenever individuals make such statements, I cannot but wish some member of their family would be thus afflicted and then we might ask whether they would be willing to have the life taken of their wife, or daughter, or son (applause). We had a man who would be classed among the incurable insane. When he was 90 years old he was afflicted with pneumonia, and I never shall forget the pleadings of the old man to keep him alive. I ask, gentlemen, who, in the face of such pleadings, would refuse to give him aid, or would assign him to the human dog pound, which is all that this proposition means. Whether criminals and insane are growing to an extent to endanger society, is a question that is often asked. Measures may eventually be taken by the State to make it impossible for those classes to perpetuate themselves. Such measures are not cruel and are without danger to the individual. Some time ago I wrote to a dozen or more prominent surgeons and got their opinions, and they assured me that the procedure is without danger. And so society may be justified in protecting itself against the propagation of these classes. But euthanasia is not to be thought of. That would be to go back to worse than barbarous times. The tendency now is to take better and still better care of our unfortunate brethren and not to kill them off because they have ceased to be useful.

LEGAL AND MEDICAL INSANITY. REFLECTIONS
UPON THE RECENT TRIAL AND CONVICTION
OF BRADFORD P. KNIGHT AT
AUGUSTA, MAINE.

*By C. P. Bancroft, M. D.,
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The trial of Bradford P. Knight is interesting because it presents a repetition of the old, old blunders that have appeared and reappeared from the time of Lord Hale's famous dictum down to our own more enlightened period. The case is particularly interesting because of the remarkably lucid charge of Judge Emery to the jury in which he clearly outlined two types of insanity—one of broader, more inclusive scope, which he called *legal insanity*; the other more limited and partial in its mental effects, to which he gave the name of *medical insanity*. Thus it was once more demonstrated how imperfectly insanity is understood by the lay observer, and how absurd it is for one not familiar with mental disease, no matter how learned he may be, to formulate classifications and definitions regardless of clinical facts. Furthermore, the case is interesting because the prisoner, in accordance with a law of the State, had been placed under observation at the State Insane Hospital at Augusta for several months prior to the trial, was pronounced insane by its superintendent, was also examined by specialists summoned by both the State and the defense and declared to be insane by them, was in fact virtually admitted to be insane by the State at the time of his trial, and at its close was remanded, as being insane, to the State asylum where he still remains. It was not so much the fact of insanity as the emphasis that was laid on the degree and type of insanity that makes this trial an interesting one,

Bradford P. Knight is nearly forty-five years of age. His mother was insane for one year; a sister, a maternal aunt and a brother were insane; a maternal uncle died in an insane hospital. Knight's disposition was naturally cheerful, and nothing unusual was noticed until, at about fourteen years of age, he began to be moody and silent at times, saying that he was coming to want some day. When about twenty-seven years of age he was married. No especial evidence of insanity appeared until the summer of 1889. About this time he had been working quite hard, and one day while out in the sun was overcome by the heat. He had a high fever, and was sick for two months, being treated for some "brain disease." After this sickness he became very despondent, would leave his home and wander off by himself. On one of these occasions he turned up at the home of one of his brothers, who lived in a distant town. The brother's family noticed that he was mentally unbalanced. He would cry, appear distressed, and was unable to concentrate his attention. He attempted to escape from his brother, who, recognizing his mental state, tried to detain him. He was finally returned to his own home. At the time his family consisted of two children, a son and a daughter, and the family relations were pleasant. The depression became so extreme that the family physician was called and found him very suspicious and melancholy. Knight said there was a conspiracy against him. His mental state was such that the physician ordered his immediate commitment to the insane hospital at Augusta. The patient was so dissatisfied at the hospital, so restless and so anxious to go home that his family removed him before any marked improvement was manifest.

After his discharge from the hospital his record was one of alternate depression and moodiness. Although he did his daily work with fair regularity, those who knew him intimately recognized that he was far from being mentally well. He was suspicious, gloomy, and capricious in his conduct. He suffered much from insomnia and took large and repeated doses of hypnotics to procure sleep. It was about two years after his discharge from the insane hospital that he began to be unduly intimate with Mamie, his wife's sister, who at the beginning of the intrigue was about thirteen or fourteen years of age. A strange mutual infatuation seemed to dominate this unfortunate couple, which

finally terminated in illicit sexual intercourse. A mass of vulgar and obscene correspondence passed between them which was produced in court and which was so vile as to suggest sexual perversion. All the while that this criminal intimacy continued, Knight was suspicious, at times gloomy, again cheerful but only for short periods. There was a record of hallucinations of sight and hearing, of delusions of persecution which he disclosed only to those who knew him most intimately. On the night of September 28, 1898, a physician was summoned to attend him at his home. He found him in a semi-conscious condition, and evidently suffering from opium poisoning. He applied the usual antidotes and in a few hours he was out of danger. Knight admitted to the doctor that he had taken the drug with suicidal intent. According to the testimony of those knowing him most intimately his despondency, occasionally alternating with very brief exhilaration, continued during the ten years that elapsed after his discharge from the hospital. He would frequently tell his wife that he was doomed to hell, that he must die. He carried his head low and tried to avoid people; he would frequently burst into tears, and was morbidly sensitive about his having been declared insane at the time of his commitment to the hospital and was fearful that people would still think him insane. At times, especially at night, he would become quite agitated, pacing the floor for hours, while his wife would bind his head with wet towels, give him sleeping potions and try in various ways to quiet him. Sometimes when laboring under this excitement he would throw the chairs across the room, and so strike and clutch his throat as to leave black and blue finger-marks on his skin. On one occasion when he had retired early, his wife heard a heavy fall in the room overhead; hastening to his room she found him on the floor lying partly across the threshold, hugging his trousers to his breast, and appearing wild and excited. When asked what was the matter he only cried.

The improper relations continued between Knight and his wife's sister, and finally led to his wife leaving him temporarily. About a year and a half before the murder the young woman went to the seashore for a while. In correspondence between them she admitted sexual intercourse with another man—a fact that did not seem to disturb Knight very much at the time. Not long after her return from the shore, through the influence of

an older sister, the young woman became interested in religious matters and evidently was determined to reform and to break off her improper relations with Knight. It was then that he began to be suspicious and to think that Mamie and her sister were conspiring against him to put him in the asylum. The more he reflected on this the more depressed he became. On one occasion he told a friend, in reply to an inquiry why he was so despondent, that his wife's sister had experienced religion, and was talking about him, and that if she did not stop her talk he should kill her.

Knight frequently importuned the young woman and became so persistent in his attentions that she left home, unbeknown to Knight, and took up her abode in a distant town in New Hampshire. He finally located her and visited her. She was thoroughly alarmed at his determined appearance on this occasion and evidently succeeded in inducing him to return on condition that she would be friendly with him. Not long after she returned to her home and secured a position as domestic in a family in Gardner. While in this new place Knight still followed her, becoming more and more demoralized by the evident attempts on the part of the two sisters to evade him. Finally he induced his wife, who had not returned to his home but was working at a hotel in Augusta, to go with him to Gardner where her younger sister was working and make another attempt to dissuade her from talking against him. His wife left him in a public park while she went to deliver his message to her sister Mamie. While waiting for her return Knight took an old envelope out of his pocket and wrote the following words on the back: "I am in Gardner to-night for the purpose of shooting Mamie Small. I have been to Augusta to see my wife to get her to go to Gardner to see Mamie and talk with her and see if she can't fix up the trouble between Mamie and I." This envelope he returned to his pocket, where it was afterwards found.

Before his wife returned, Mamie unexpectedly appeared with a boy about twelve years of age. Knight rushed up to her excitedly, and seizing her by the arm asked: "What is all this trouble about?" She told him that if he did not let her alone she would make trouble for him, and, breaking away from him, started to run. Knight pursued her and fired three shots into her body. Then running away he returned to his home about

eight miles distant, where he spent the night with his little daughter. The next morning he was arrested. He told the sheriff that his wife's family had been trying for the past five years to put him in the asylum and that he carried the revolver for an occasion like this.

After his commitment to the jail he refused food because he said it was poisoned. The sheriff, in whom he seemed to have confidence, finally induced him to eat by feeding it to him with his own hands. The next day the sheriff brought in the turnkey and persuaded Knight that whatever the turnkey gave him would be all right and then he resumed eating. His conduct at the jail being peculiar, and it being well known that he had on a former occasion been a patient at the asylum, he was ordered to be transferred to the State Hospital for the Insane at Augusta that the question of his insanity might be more definitely determined.

While at the hospital the testimony showed that he was frequently noisy both day and night. He would pace the floor gestulating and swearing and talking to himself. Sometimes he was extremely noisy. He was very sleepless and occasionally so agitated at night that it became necessary to restrain him with sheets. His conversation showed that he was laboring under delusions. On one occasion he told his attendant that he was swearing "against that clique down there." He conceived the most bitter hatred against the superintendent, telling his wife and the attendants that the doctor was suppressing his mail and keeping his family away from him. On one occasion he spat in the superintendent's face, and on another secreted a door-knob with which, he afterward admitted, he had intended to kill the doctor on the first favorable opportunity. Knight was under observation at the hospital from February 24, 1899, to October 18, 1899.

Dr. Sanborn, the superintendent, testified in court that Knight was insane ten years ago and that he was insane now and that it was his belief that he had never recovered from the first attack, but that his melancholia of ten years ago had gradually merged into a condition of chronic delusional insanity.

A few days before the trial Knight was examined by Dr. Edward Cowles, Dr. H. M. Quinby and Dr. George F. Jelly, all of whom were summoned by the State. At the trial the evi-

dence of these gentlemen was suppressed by the county attorney, although it was demanded by the defense, who claimed that this evidence was paid for by the State and belonged to the people. The inference that this evidence was not favorable to the prosecution, and for this reason was suppressed, was perfectly legitimate.

The writer, summoned by the defense, examined Knight in the jail just before his trial. Although only forty-five years of age he looked like a man about sixty. He appeared depressed and anxious, but talked willingly and conveyed the impression of perfect sincerity. All that he said was confirmed by the evidence at the trial and was substantially similar to what has already appeared in the history. Particularly worthy of note are the following statements made to the writer: He said his soul was lost ten years ago. At that time he attended a religious meeting and after this meeting was commanded by the Lord to pray in the house. He deliberately disobeyed and prayed in the woodshed, and from that time was doomed to eternal torment in hell. He was so restless under this agonizing thought that he could not keep still and was impelled to wander away alone by himself. He said that at the time of his first residence at the hospital he was used well and he had no fault to find with any one, but the sights and sounds of the place were awfully depressing to him. He said that it was a year and a half before the murder that Mamie first conceived the idea of making him out insane for the purpose of getting him out of the way so that she could associate with another man with whom she had become acquainted at the seashore. He laid no importance upon the fact that the girl had decided to lead a better life. Feeling that she was still trying to place him in the asylum, he followed her to New Hampshire, and exacted a promise from her that she would be friendly. He said, however, that he had made up his mind to kill her if she continued this persecution. He felt it was right for him to take her life, for the facts justified the killing. As for remorse, he said, in reply to a question asked him on this point, that he felt none whatever; that Mamie herself had forgiven him and frequently appeared to him at night as happy and smiling as ever. The murder did not trouble him as did the willful disobedience of the Lord's command to pray in the house ten years ago.

As to his second residence at the insane hospital he told the writer that Dr. Sanborn had tried to make his life miserable and had endeavored to keep his family away from him. When asked why the doctor should desire to persecute him, he said he did not know, but that it was perfectly evident in his looks. He further claimed that he intended to kill the doctor and had made a slung-shot out of a door-knob—all of which was confirmed later by the evidence at the trial. He claimed that the killing of the superintendent under these circumstances would have been justifiable.

In reviewing the history of this case any alienist would say that this man, of decidedly insane heredity, wavered a little mentally at the critical age of puberty; that at 34 or 35 years of age he had an attack of melancholia following heat prostration, and that this attack was never really recovered from, but passed on into a chronic systematized delusional insanity. In other words, Knight's case is one of *dementing psychosis*. The underlying disease process is one of progressive mental enfeeblement. Imperative conceptions, fixed ideas, found easy lodgment in his mind, hereditarily predisposed to disease. As is usual in such cases, the higher intellectual processes gradually grew weaker. The judgment, the moral nature, and above all the will-power were early affected.

The first appearance of mental disease was manifested in the imperative conceptions, the fixed ideas. These symptoms persisting, as the history shows for a period of ten years, there followed the usual signs of mental impairment. The power of continuous and successful application became weakened. He was moody and absent-minded. His moral nature, his judgment, and above all his will-power were affected. The morbid egoism that underlies the unfounded suspicions; the defective judgment that seems incapable of weighing really important facts, but is influenced by the more puerile and fictitious creations of the imagination; the weakened will-power that is unable to resist the impulses suggested by the disordered imagination—all these phenomena are perfectly apparent to the alienist in the life history of Bradford P. Knight.

The prosecution was skilfully conducted by County Attorney Heselton, who argued that his deliberate planning of the murder, his successful escape, his fear of the crowd when arrested

and carried to jail, all indicated sanity, and more important than all else showed that he knew right from wrong with reference to the particular act in question. The fact that he feared the law, that he attempted and successfully made his escape showed that he knew his act was wrong in the eyes of the law, and that this was unmistakable evidence of responsibility. It was argued that jealousy was the motive for the crime, and not the so-called fear of being put in an asylum by Mamie and Lizzie, and that what had been called delusions and the depression covering a period of ten years were really the warnings of conscience in a guilty soul; that as regarded the expert testimony it was theory and not fact; that experts can always be produced to go into court and testify one way or the other. On the other hand, the learned counsel failed to explain why he did not produce the eminent experts, whom he had summoned from a great distance to substantiate his own ingenious theory. He still further claimed that the prisoner's coherent conversation and letter-writing, the fact that he transacted business and manifested no marked peculiarities of speech and conduct were unquestionable evidences of sanity. As is usually the case, these arguments had great weight with those whose feelings were aroused by the thought of the brutal and cold-blooded murder of a defenseless and attractive young woman.

The defense was eloquently and ably argued by Hon. H. M. Heath of Augusta, who traced the working of this disordered mind from the time of his attack of melancholia down to the moment of the shooting. He argued that the crime was the product of morbid reasoning, that the mental memorandum made on the old envelope, showing the intention of killing the girl, was not the act of a sane mind; this deliberately written note disclosed the real character of the act; it showed that the man's will-power was weakened by disease and controlled by overpowering delusions.

The charge of Judge Emery is especially interesting because it is a very clear exposition of an old fallacy concerning insanity as a defense for crime. Moreover, this is the popular conception, and because of its erroneousness, deserves the consideration of the alienist as often as it is repeated. According to this view, insanity in itself may not be a suitable defense. The insanity must have proceeded to a certain extent; its ravages

upon the mind must have produced certain definite results before it can be admitted as a proper defense; that—as Lord Hale had ruled in the olden time—there was a partial and a total insanity; that partial insanity, such as occurs in melancholia, did not destroy responsibility, but that total insanity or that which reduced the understanding and the memory to that of the infant or the wild beast was the only form of insanity that could actually extenuate crime. Similarly, in the present instance, emphasis was laid on the extent and the degree to which the insanity had progressed, not, to be sure, to the absurd conclusion of Lord Hale, but to one which is fallacious, medically incorrect, and the tendency of which is towards a miscarriage of justice.

Alienists do not criticise the theory of modified responsibility due to partial mental enfeeblement, but they do very justly object to the arbitrary principle, laid down by Judge Emery, that to establish responsibility in any case the insanity must have proceeded to the extent of destroying in the individual a knowledge of right and wrong with reference to the particular act. Such a view proceeds from unfamiliarity with mental disease, from ignorance of the way in which insanity affects the higher mental faculties. The theory that partial or “medical” insanity is not an extenuation of crime, though acceptable to the legal and lay mind generally, is not satisfactory to the alienist because it does not represent actual facts.

Judge Emery’s reasoning is as follows: He says “the word ‘insanity’ is used in these matters with two significations from the standpoint of the person addressing himself to the question. Insanity in a medical sense, in the sense that it is used and thought of by a physician who is treating disease, means a mental disease, a mind disease, as distinct from a healthy mind; and the medical man who is addressing himself to the treatment of disease looks on and regards the question of whether or not a man’s mind is diseased, and, if so, the character of that disease, its symptoms, and so forth—its probable extent and how far it may have progressed; the same as a medical man, perhaps, treating the body would say that a person with a weak heart, dyspepsia or with sundry other difficulties, had an unhealthy body, and yet the body would go on doing work. It might be said that a man drawn as a juryman might be pronounced by a

physician not to have a sound body; that there would be some bodily defect; and yet the man need not be excused from jury duty. It would have to be of such a character as would seem to disqualify him from sitting as a juror. But we have to also consider it in what is called the legal sense. Insanity means unsoundness. . . . In a legal sense when we are considering men's responsibility for their acts, we come to the question of the legal meaning of the term 'insanity'—what meaning that has in law. It means something more than in the medical sense. It means a mental disease of such character and extent as for the time to destroy mental responsibility. Hence you see that a person may be in the eye of a doctor medically insane, that is, he may have a diseased mind, and yet not be insane in the legal sense; just as the body may be in a medical sense unsound and yet practically sound. A man might have eczema on his arm and a physician would say that he was not perfectly sound in the body, and yet he could go on and do business with practically no inconvenience. The question we are to consider here is not simply whether this man at the time of this killing was what we call medically insane, that is, had a diseased mind from the doctor's point of view, but whether he was unsound in the legal sense of that term—what the law understands is insanity."

He says still further: "One may be criminally responsible, though he is suffering from some mental derangement. The possession of sound faculties and full vigor of mind, unimpaired by disease or infirmity, is not required as a condition of criminal responsibility. The law recognizes that the human mind has varied and distinct powers and functions, and so forth; that some one or more of these faculties may be diseased or disordered while the others continue unimpaired and undisturbed. One may suffer from some mental delusion or infirmity and yet in all other respects be rational, and, therefore, responsible.

"On the other hand, to make out his case he is not required to prove a state of idiocy—a state of complete mental imbecility. He is not required to prove that he is a raving maniac; not required to prove that his mind was all gone, all upset. Nor is he required to prove that a majority of the faculties of his mind were affected, nor need he show that he could not do any business, nor need he show that this thing was continuous or of long duration."

"How far must the mental disease go," he inquires, "in order to establish irresponsibility?" In accordance with the rule of law in the State of Maine, he says: "To establish the proposition that he was insane in the legal sense, and, therefore, not criminally responsible, the respondent must prove that at the time of doing the act he was afflicted with mental disease of such character or extent that he had not then the mental capacity sufficient to distinguish between right and wrong as to the particular act he was doing; or, in other words, that he had not knowledge, consciousness or conscience enough to know that the act he was doing was wrong and criminal and one for which he would be liable to punishment; or, in still other words, that he was so afflicted by mental disease as not to know the nature and quality of the act, he was doing; or, if he did know that much, he yet did not know that the act was unlawful and wrong. If he does prove that much, he establishes the proposition that he was legally unsound—insane in legal sense.

"Again, whatever was the character or extent of his mental disease, if any he had, if he yet had sufficient mental capacity to understand and know the situation, to understand and remember the nature and quality of the act he was doing, that it was unlawful and wrong, he was not then insane in the legal sense of that term. He must show then, first the existence at that time of some mental disease. Secondly, that the disease was of such character or extent that it deprived him at that time of the usual mental capacity to understand the nature and quality of the act he was doing, its character and consequences; in other words, the mental capacity to distinguish between right and wrong as to that particular act; He must show the connection between the mental disease, if there was one, and this unhappy result, by the reduction of his mental capacity to the state which I have described. If both are shown, namely, the existence of the mental disease, and its extent to the point I have described, then he was insane in the legal sense and the killing was simply the unfortunate result of mental disease; otherwise, the killing must be held to be the result of the man's vicious acts, for which he is responsible."

To prove that in the case of Bradford P. Knight the mental disease had not progressed to this particular point of destroying a knowledge of right and wrong with reference to the particular

act, Judge Emery called upon the jury to especially note the fact that he conversed with people upon ordinary topics, that he transacted routine business, that he carefully planned the crime, that he successfully eluded arrest and, throwing people off the track, escaped to his own home—all of which conclusively proved, so the judge said, that the prisoner knew his act was wrong and that he would be punished for it.

Thus, the main factors in Knight's case were relegated to the background, and symptoms were emphasized to the jury's mind which are of minor importance and have little significance in a dementing psychosis of the type of this particular case. Every alienist knows that coherent conversation, transaction of routine business, the planning of murder or of ingenious and successful escapes, are wholly consistent with advanced mental disease and complete irresponsibility.

The jury returned the only verdict possible under Judge Emery's very explicit charge, viz, guilty of murder in the first degree.

No sentence was imposed. After his return to the jail, upon a written request from the sheriff that Knight needed medical care, Judge Emery issued the following order for his transfer to the State Hospital for the Insane: "Upon the foregoing application, it has been made to appear to me that the said Bradford P. Knight may be now so far diseased in mind as to require medical treatment in some hospital for the insane, and it is, therefore, *Ordered*, that the sheriff of said county transfer the body of said Bradford P. Knight to the State Hospital for the Insane in Augusta, and that the superintendent of said hospital and the officers thereof receive and care for said Bradford P. Knight, until further order of some justice of the said court."

Before the cause was tried and the charge was given, the counsel for the defense requested the presiding judge to instruct the jury that if the respondent's mind was diseased, and as a result his will-power was so affected that he could not refrain from committing the act, the act was the product of his mental disease, that then he would not be responsible even though he could distinguish between right and wrong as to the particular act, and even though he was conscious that the act itself was wrong and punishable.

The counsel for the defense still further requested that the

judge instruct that capacity to distinguish right from wrong as to the particular act does not necessarily imply responsibility: that the important thing to ascertain is whether the determination to kill was the product of the mental disease, and if so, whether the mental disease had progressed so far as to render the prisoner incapable of refraining from committing the act, and that under these circumstances the prisoner would not be responsible even though he did know that the act was wrong.

The counsel for the defense claimed that the memorandum written by the prisoner just before the murder and other facts tended to establish the issues submitted in these requests to the presiding judge. Because they were declined and because the jury were instructed distinctly to base their findings on the fact as to whether the prisoner at the time of committing the act knew that the act was wrong and punishable, the counsel for the defense entered exceptions, which were allowed by Judge Emery, and the very interesting points raised as to what constitutes true responsibility in the insane mind will be argued before the bench at the next law term.

This furnishes a test case, as far as future rulings in the State of Maine are concerned, whenever insanity is raised as a defense, and will be watched with much interest by all medico-legal specialists. If the ruling of Judge Emery is to prevail it is difficult to see how justice can be secured for any but the idiot, the extremely demented, or the raving insane.

The fact is, insanity and irresponsibility, or at least modified responsibility, are nearly if not quite synonymous. Certainly it is true that no form of insanity exists in which there is not modified responsibility. Not only does the insane man reason from wrong data, but the power to see things in their proper relationship is impaired. His mental perspective is distorted. The inability to make rational comparisons and to exercise the power of choice are the earliest symptoms of mental disease. The capacity to distinguish right from wrong either in the abstract or in any particular case is not lost until the insanity is far advanced. Such loss is one of the later manifestations of pronounced functional and organic brain disturbance. To arbitrarily state, therefore, that responsibility depends upon a knowledge of right and wrong is decidedly unscientific.

In his charge Judge Emery particularly instructed the jury

that it is not necessary for the insanity to have proceeded to the extent of dementia or idiocy, or profound confusional conditions. Unfortunately for his theory, these are the only forms of insanity in which a knowledge of right and wrong is obliterated. In all the reasoning or partial insanities this knowledge is unimpaired. It is the will-power that is damaged, and not the power to distinguish right from wrong either in the abstract or in any particular case. The instruction to the jury is, therefore, erroneous because it does not represent psycho-pathological facts. Each case must be especially studied with reference to this particular point; hence the absurdity of laying down a law which is incompatible with the clinical history of mental disease, and the necessity of submitting the facts to the examination of experts. In this particular case the experts on either side would have undoubtedly agreed as to the man's irresponsibility. Unfortunately, the conclusions of the specialists summoned by the prosecution were suppressed and the opinions of those summoned for the defense were not allowed the weight to which they were entitled, and the prisoner, unquestionably insane, was convicted on unscientific grounds.

The theory that partial or "medical" insanity necessarily or usually implies responsibility is based upon fallacious reasoning. One error, as has been so often stated by alienists, lies in the fact that partial insanity is not so limited in its effect on mental operations as the lay mind conceives it to be. Limited delusions and isolated morbid ideas may be only a small portion of the symptomatology. They are noticeable phenomena, but must not be considered to represent all that is morbid. Because the insane person manifests only one or two delusions, talks coherently and intelligently and transacts business correctly, it does not follow that his mind is sound on all other relationships outside the one or two prominent delusions that he may exhibit. Their unfortunate possessor is usually damaged in all the higher mental processes, such as the judgment, the moral perceptions, and, particularly, in the exercise of the will-power.

While apparently sane on all other topics and able to talk connectedly on every-day matters and transact his routine business, he may be so dominated by certain prevailing ideas as to be wholly unable to resist certain acts, because in his own disor-

dered mind they are justified by the facts in his individual life. These are the insane people who are most dangerous. It is not the turbulent maniac, full of incoherence and noisy destructiveness, but the quiet, secretive paranoiac, who moves around amongst people in his daily avocations, who may spread destruction in his path. Beware how you tread upon the high explosive of his disordered brain! The attempt to circumscribe any form of insanity and call it partial is as unscientific as it is unsatisfactory. Every species of insanity is mental disease and the attempt to draw arbitrary lines around any form of mental disease, and to say that it shall be limited by this or that symptom is not sustained by what we know of mind. The functions of mind are too interdependent to be so circumscribed. The analogy between a disordered mind and a diseased member of the body is not a happy one. Eczema of the arm and disease of the brain are two morbid conditions so utterly unlike as not to admit of any comparison and would hardly have suggested themselves to any one but a non-medical person. While it is true that a local skin disease on the arm does not incapacitate its possessor for his daily occupation, it does not follow that a functional or organic disturbance of the brain does not interfere with all the higher mental processes that depend on cerebral activity for their manifestation.

The man who is, as the lawyers say, "partially" insane may know that his act is wrong in the eyes of the law and a punishable offense, but in his disordered reasoning he will argue that the facts justify the deed, and it will be impossible to convince him to the contrary. So distorted is his perception of the proper relations of things, so overwhelmingly exaggerated is his own morbid egoism, that he will feel impressed with the justice and absolute necessity of his act and will usually assert that, when others know all, his conduct will be sustained. The reasoning of the partially insane mind is nearly always utterly inconsistent. But the laity usually commit the blunder of expecting and insisting that the partially insane mind will reason exactly as does the sane mind. In this case the suspicion that the superintendent of the asylum was suppressing his mail and keeping his family away from him justified his attempt upon his life, just as did the firm belief that Mamie was talking about him and trying to place him in an asylum, in order that she

might consort with another man, justify him in taking her life. He might understand ever so clearly that the act was wrong in the eyes of the law, but the feeling of its absolute justice in his own particular case was so great that he was compelled to commit the deed no matter what the consequence might be.

The real test of responsibility, then, is not a knowledge of right or wrong with reference to the particular act, but as Dr. C. F. MacDonald has so well expressed it, "Knowing the right and knowing the wrong, has the man the power to choose the right and avoid the wrong?" It is not a question of knowledge, but the power to choose between two courses of action. If he has not such power, then his act is the product of his disease, and he is not responsible.

In every case of suspected insanity especial effort should be made to ascertain whether the criminal act is the result of morbid reasoning or is the product of mental disease. If the act is the outgrowth of disordered reasoning, if the man's judgment is so enfeebled that he cannot properly estimate the natural relations of things, if his will-power is so enfeebled that he cannot resist the powerful pressure from within that impels him to the deed, then the act may be said to be the product of his disease and is not criminal, no matter how clearly he may understand the nature and quality of the act, whether right or wrong in the eyes of the law, or how coherently and intelligently he may converse on ordinary topics, and plan and effect an ingenious escape from detection.

Finally, in view of all that we know of the operations of the insane mind, it is greatly to be desired that the simpler ruling of Chief-Justice Doe, in the famous New Hampshire case of *The State versus Pike*, may become more prevalent, wherever insanity is raised as a defense. The learned judge ruled that there is no legal test of insanity. Each case must be decided on its own merits. The basic facts are that insanity is a mental disease; the product of mental disease cannot be a crime; tests of mental disease are matters of fact, and whether the defendant has a disease and whether his act is the product of that disease is a question of fact for the jury to consider. This is good law and sound medicine.

DISCUSSION.

Dr. EVANS: There probably has not been a paper read before the Association which so thoroughly interests every student of mental disease, every student of the medico-legal aspect of insanity, as the one we have just listened to. It is a forceful paper, well written and states the experiences of most of the members of the Association who have figured in the courts as medico-legal experts. These are the conditions with which every medical man connected with such work, such responsible duties as are entrusted to us, has to deal with. I am of the opinion, and in saying this I simply voice that which has been said before, that so long as the court or the laws established in the State shall allow one side to employ its physician, or so-called expert, and permit the other side, the defense, to employ its particular expert, so long will this state of affairs to some extent exist and this embarrassment to the medical man have to be endured. It is perfectly natural that the prosecution shall look upon the physician employed by the defense as a medical advocate for the defense; and it is perfectly natural that the defense shall look upon the physician employed by the prosecution as an advocate for the prosecution. Of course, we may hold up our hands in holy horror that we should be suspected of such a thing, but every time three or four so-called experts are called some are found to be upon one side and some upon the other. One states that Mr. A., who is before the jury, is deranged mentally, and the one on the other side testifies that Mr. A. is guilty because he fully comprehended the crime he committed. Then, after the testimony is in, what is the procedure of the research made by the able jurors? They immediately begin to look for precedents, not to use reason with the clinical facts, and go over the various scientific processes indulged in to arrive at truth in the case, but they go back through the statute law to see what precedent will enable them to say that the man is insane or the man is not insane. If there is nothing on the statute book to fit the particular case, they go back to the common law, which goes back, in fact, to the middle ages, when some judge delivered an opinion, and then with this musty, dusty and unscientific material, they say that so and so at a certain time gave a particular ruling, and inasmuch as there is nothing else to go by we must accept that as applicable to this particular case. That is what the physician in insanity must contend with. And we must continue to contend with it until somebody is given authority to select the expert to examine into the sanity or insanity of the person in question and to declare that such testimony will stand. I am called, as the rest of you are, and if I am called by the prosecution or defense I say that I will go and examine the man and accept no fee until I have come to a conclusion in the case. Then I state to them that I can or cannot be of advantage to them. If employed I then get up and give my testimony. Then the other side presents to the jury a statement that here is a man brought by the defense to support their case and that the prosecution now will present evidence that conflicts with it. I was in the case of Edward J. Everts, in which the man was sentenced six times and not hung and the seventh time he was sentenced and hung. The history was something like this: The individual was given to debauches. He

was a special detective on a certain railroad. He had threatened to shoot his best friends. Even when he was walking with people he seemed to love, he would take his pistol out and say, "here, this has gone far enough," and threaten to shoot them. He had hallucinations of sight and so on. He made an arrest of considerable value and received a large fee, after which he went on a drunk. Then after that he did numerous inconsistent things, and finally shot the superintendent of the railroad, with whom he was associated as detective. I was called by the defense to examine the case. I took with me Dr. Prout, the resident physician, and there were with us six or eight other physicians. If we blindfolded the patient he would fall, no difference whether it was on the stove, or on benches or where. He couldn't touch the end of his nose. We went over him carefully and tested him for anæsthetic areas. We tested with heat, with the ordinary touch, with cotton wool, and we marked all over various parts of his body where he did not know we were touching him with hot water in a test tube, or with cotton wool. He said the same thing every time we went over him. The court asked if he could not feign it; I said I could not feign it myself. If you were to mark out spots that I said were anæsthetic and then blindfold me and go over the body I could not feign that those spots were anæsthetic. I do not think anybody could do so. The individual had well marked hallucinations and also prominent symptoms of parietic dementia, except he did not have delusions of grandeur. The expert for the defense stated that such delusions were necessary to a diagnosis of parietic dementia. The testimony was to the effect that in the absence of delusions of grandeur, of immense wealth, of importance, or of great power, that no man could make a diagnosis of parietic dementia. Of course, it was for the jury and court to determine whether that was true or not. The authorities were to the contrary and I told them so. This man, when he was told by his keeper to come on and go out, got up and went out of the court room apparently with perfect intelligence and he watched his counsel while they were discussing the case. This is the class of cases that are condemned, and these are the cases in which reputable physicians, sometimes feeling they are doing their full duty, usher insane persons to the scaffold, notwithstanding the statements of those who believe the patient is not responsible. I have heard charge after charge of the character we have referred to. And this will continue. But it is a subject that is so interesting to me and my experience has been so frequently of just that character that I feel more than ordinarily enthusiastic about it, and I wish to express my appreciation of the Doctor's presentation of the subject.

Dr. JELLY: I have listened with great interest to Dr. Bancroft's paper and I wish to say that I agree with him in every word he has written and in his opinion. As he said, the counsel summoned myself and others to examine the man. We spent some time examining him. I am sorry the case is not entirely finished, for under the circumstances it seems to me courteous to the district attorney that I should not say all I saw and heard. But I think I may properly say to you that Dr. Bancroft gave a very able opinion and a very full opinion, going into the history of Mr. Knight and stating that it was a case of insanity and that he was irresponsible and should be sent to an insane

asylum. There was no question of his insanity. There was no question that he acted under an impulse and was not responsible. Beyond that I do not feel justified in going at the present time. I am glad to say to Dr. Evans that the quality of expert testimony about Massachusetts is, I hope, in a certain degree, changing. We, in Massachusetts, as I have no doubt is true of you in other parts of the country, have been endeavoring to bring about consonance among the experts in these cases. The Doctor has been very active in urging that matter, and there have been several cases in which we have asked to examine the prisoner together. We have sometimes been in the case and said in the presence of the prisoner that we didn't know which side we were on. There is one case in which the attorney, knowing that Dr. Bancroft had been asked to examine the patient, asked me to say to Dr. Bancroft that he was not only at liberty to see the patient with me, but that he wished he would see the patient with me. We came to the conclusions that we would present to the court and acted in accordance. In the Palmer trial, Dr. Bancroft and Dr. Wise on one side and Dr. Cowles, Dr. Channing and myself and some others on the other side of the defense, presented a memorial to the court after the trial and the individual was sent to an asylum. The counsel of both sides will not always consent to a consultation between the experts, but that is the proper course. We should not be put in the line of extreme partisans, as has been the tendency heretofore.

Dr. HANCKER: I would like to bear Dr. Evans out in regard to experts on insanity. It has been my fortunate experience to have been connected with a number of cases and I have observed that the court and jury do not pay any attention to the testimony of experts, but they refer to some ancient case and are governed by that ruling. I think it is due to this Society to know a law we have in Delaware. That law is that any two persons in the State of Delaware can go before a sheriff and swear that any person in custody is not insane and a trial will have to be had at once before the sheriff. That law was passed because of a case that was under my care, a man who would go into the chicken coop and converse with the chickens, etc., and who was undoubtedly a paranoiac. That was only about six months ago. In that trial there were eight physicians who swore that he was insane, and all had examined him several times before his admission to the hospital and they all said that the man was insane; but, nevertheless, the jury decided that he was not insane. The individual has had several attacks since; and the time is not far distant when he will probably do damage to somebody.

THE INFLUENCE OF MILITARY CAMPAIGNS IN TROPICAL CLIMATES IN THE PRO- DUCTION OF INSANITY.

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It is perhaps too soon after the Spanish-American war to determine its precise influence as a factor in the development of mental disease among the soldiers engaged in it, and the campaign in the Philippines is yet in progress. A report of the character indicated in the title to this paper must therefore be incomplete if based upon the results of these two campaigns, and my only apology for now presenting a preliminary study of our experiences is that the subject is unusually interesting and has attracted much attention. Much confusion exists in the mind of the public as to the influence of these campaigns in the production of insanity and many erroneous statements have been made. In my investigations of the literature, too, I can find very little of any value on the subject. I cannot find that any English writer on mental disease has ever considered the influence of military campaigns in causing insanity, whether these were in tropical climates or elsewhere, nor do I remember to have seen any statement regarding the effect of our own civil war in this direction. For these reasons I have felt that a report, even though fragmentary, might prove sufficiently interesting and valuable to merit a few moments of your time.

War was declared with Spain by the United States in the spring of 1898. The first volunteers were called into service in May of that year. The regular army at that time numbered about 29,500 men. The total number of volunteers called into service during the war was in round numbers 223,500. The average date of their entering the service was probably about

May 15, 1898. About one-half of these were mustered out in the late fall and early winter of 1898 and the other half remained in the service during a part of the year 1899, some of the regiments not being mustered out until the fall of that year. I have averaged the date of the muster out of the first half at November 15, 1898, and of the last half at May 15, 1899. This would make the general average February 15, 1899, or nine months' service for the entire volunteer arms. Of the volunteers, in round numbers, 70,000 saw more or less service in Cuba and Porto Rico, and 15,500 were sent to the Philippines. This leaves the number remaining in Southern camps during the war approximately 13,800. The regiments that went to Cuba or Porto Rico did not do so until July 1898 or later, and the average period, from the date when they left the United States until their return and their subsequent muster out, was not to exceed six months. The period subsequent to their return from Cuba and Porto Rico until their muster out, is included with this time, as the cases of insanity developing among them after their return could reasonably be attributed in large part to this campaign, and in our classification they are so included.

Reducing the volunteer force to an equal basis of one year's service for each man, we have a statement of strength something like the following:

Total strength of volunteer army, 223,500 men for 9 months, or 168,000 for 12 months.

Number going to Cuba and Porto Rico, 70,000 men for 6 months, including their service subsequently, or 35,000 for one year.

Number going to the Philippines, 15,500 men for about 14 months' service, or 18,000 for 12 months.

Number in Southern camps during the year, 115,000 for 12 months. Of the regular army, as already stated, the strength at the beginning of the war was about 29,500, and on June 30, 1900, its strength was about 65,000. A portion of these went to Cuba and Porto Rico, another portion to the Philippines, and the balance remained in the United States, but I have found it impossible to get reliable information as to the exact proportions of these three divisions. Practically all of these regiments were engaged the greater part of the time in either Cuba

and Porto Rico, or in the Philippines. Of the 65,000, the number who went to the Philippines, including the artillery, numbered in the neighborhood of 26,000. These were nearly all in service in Cuba and Porto Rico before going to the Philippines. The date of their going to the latter ranged from June, 1898, until June, 1899. Since June 30, 1899, the strength of the regular army has been increased to 100,000 and the total number now in the Philippines is not less than 60,000 men.

It will be impossible, however, to accurately estimate the number in this campaign on the basis of one year's service for each man, and as the statistics of the number of cases of insanity developing among them is still incomplete, our attempt to draw conclusions as to the proportions affected may be misleading. I think it will be safe to say that of the regular army, 17,000 served in the Cuban and Porto Rican campaign and that their service in it including the subsequent period up to the time of their sailing for the Philippines would average not less than 9 months, or say 13,000 for 12 months. Adding this number to the volunteer force engaged in the Cuban and Porto Rican campaign we have a total of 48,000 men for one year, and 115,000 for one year remaining in the camps in the United States. A part of this time, in fact the greater part of it, was spent in Southern camps, so that this designation will be given them in the classification.

As to the Philippine campaign we can only say that 18,000 volunteers served for one year in it and that not less than 60,000 regular soldiers have been engaged in it probably for an average of not less than one year, or a total of at least 78,000 soldiers for not less than one year.

In preparing the data for this paper letters were sent to the superintendents of all the hospitals for the insane in the United States, to ascertain, if possible, how many had been admitted to other institutions than this hospital. Responses showed that 37 had been admitted from among those who had served in one or other of the campaigns. The total number of cases of insanity developing in the army and navy from those engaged in these campaigns during the period from May 1, 1898, to May 1, 1900, and admitted to the Government Hospital for the Insane was 297. Of these 78 were among the army organizations which were engaged in the Philippine campaign and occur-

red either during their stay in the islands or subsequent thereto. Seventy-eight were among the army organizations engaged in Cuba and Porto Rico, and 85 occurred among those troops whose service was wholly restricted to the southern camps. Fifty-six cases occurred in the navy. The duration of the service of the separate groups can be only approximated, as well as the numerical strength, but assuming the basis already indicated as probably fair, we have an average annual development of mental disease in the Philippine campaign of one in 1,000. As a number of cases from this campaign have not yet reached the hospital, and as the effects of the campaign are not yet fully developed, this estimate is not reliable nor complete. It does suffice to show, however, that there is no marked tendency toward the production of insanity in the conditions of this service.

Of those engaged in the Cuban and Porto Rican campaign an annual average of one in 615 developed insanity. While of those whose service was restricted to the southern camps, one in 1,350, only, became insane. I have not been able to approximate the strength of the navy during this period and consequently can give no estimate of the proportion affected, but it would seem that 56 is a relatively higher proportion than that of either of the other groups. It is also of interest to note that while no cases occurred in the hospital corps in the Cuban campaign, and only 6 out of 78 cases in the Philippines, no less than 14, out of a total of 85 cases, developed among the hospital corps in the southern camps. This is an extraordinarily large proportion considering the relatively small number in this service, and is doubtless due to the character of the service, and the influence of the environment of hospital life.

The classes entering the army and navy are naturally selected and for this reason should have greater resistance to the ordinary causes of mental disorder, yet of the total number of 297 cases, no less than 39 had a history of previous attacks of insanity in their own person, and 21 had been inmates of asylums previous to enlistment.

TABLE I.—SHOWING THE AGES OF THOSE ADMITTED.

	Philip- pines	Cuba and Porto Rico	South- ern camps	Navy	Total
Under 20 years.....	2	1	7	1	11
Between 20 and 25 years.....	23	31	26	12	92
" 25 " 30 ".....	21	18	25	22	86
" 30 " 35 ".....	19	11	16	9	55
" 35 " 40 ".....	8	2	5	4	19
" 40 " 45 ".....	.....	7	3	5	15
" 45 " 50 ".....	1	6	1	2	10
Over 50 years.....	1	1	1	1	4
Unknown.....	3	1	1	.....	5
Totals.....	78	78	85	56	297

The age of the cases admitted is shown in the accompanying table, (table No. 1.) No less than 79 per cent. of the cases admitted from the army were between the ages of 20 and 35 years, while of the cases from the navy 77 per cent. were between these ages.

TABLE II.—SHOWING THE FORM OF DISEASE IN THOSE ADMITTED.

	Philip- pines	Cuba and Porto Rico	South- ern camps	Navy	Total
Melancholia.....					
Melancholia acute.....	49	43	32	31	155
Melancholia chronic.....	1	2	2	2	7
Mania.....					
Mania acute.....	15	22	36	13	86
Mania chronic.....	.....	1	1	.....	2
Mania with epilepsy.....	.....	1	.....	1	2
Dementia.....					
Dementia acute.....	11	6	9	6	32
Dementia chronic.....	.....	.....	1	1	2
Dementia with epilepsy.....	.....	.....	2	.....	2
General paralysis.....	1	3	2	2	8
Not insane.....	1	.....	.....	.....	1
Totals.....	78	78	85	56	297

Table No. 2 shows the form of disease, as classified on the basis of symptomatology, and it is interesting to note the large proportion of cases of melancholia, and the relatively larger number among those engaged in the Philippine and Cuban campaigns as compared with those whose service was confined to this country. Of those from the Philippines, 64 per cent. were cases of melancholia and 19 per cent. mania; of those from Cuba and Porto Rico, 56 per cent. were melancholia and 31 per cent. mania; from the navy 59 per cent. were melancholia and 25

per cent. mania; while from the southern camps 40 per cent. were of melancholia and 43 per cent. of mania. Of the 297 cases 8 were cases of general paralysis and 32 of acute dementia. As far as this discloses anything it would seem to indicate that nostalgia was a factor of some importance in the development of the disease, this probably accounting for the larger proportion of cases of melancholia from the foreign campaigns and the largest proportion of all from the Philippines.

TABLE III—SHOWING THE ALLEGED CAUSE OF DISEASE.

	Philippines	Cuba and Porto Rico	Southern camps	Navy	Total
Alcoholism	5	12	14	16	47
Army life	1	2	11		14
Cerebral congestion			1		1
Death of father	1				1
Dysentery and diarrhoea	6				6
Exposure and fatigue	1	2		1	4
Epilepsy		1	1	1	3
Fevers	24	22	21	1	68
G. S. W. of chest	1	1			2
Heredity and previous attack	1	3	5	2	6
Injury to head	3	2	5	1	12
Insomnia	1			1	2
Loss of leg			1		1
Masturbation	2	10	9	5	26
Meningitis		1			1
Measles			1		1
Not insane	1	2			3
Nostalgia	1	2	8	3	14
Over heat	9	8	6	7	30
Organic disease of brain	2		2	2	6
Opium habit	1	1			2
Over study			1		1
Optic neuritis				1	1
Rheumatism		1			1
Spinal sclerosis	1			1	2
Tuberculosis	1				1
Veneral disease	1	1	5	4	11
Unknown	24	9	1	13	47
Totals	87	78	88	59	312

Table No. 3 gives the assigned cause and discloses some rather interesting features. Thus, of those from the Philippines, in 31 per cent. of the cases, fever, either malarial or typhoid, was assigned as a cause, over-heat in a little over 11 per cent., and alcoholism in a little more than 6 per cent. From the Cuban campaign, in 28 per cent. fever was the assigned cause, over heat in a little more than 10 per cent. and alcoholism in 15 per cent. From the southern camps, in 24.7 per cent. fever was a cause, over-heat in 7 per cent. and alcoholism in a little over 16 per cent. From the navy, fever was the assigned cause in

only one case, or less than 2 per cent., over-heat in a little over 12 per cent. and alcoholism in no less than 28.5 per cent. A fact which possibly invalidates these results to some extent is that the number of cases in which the cause was unknown is much larger among the cases from the Philippines and the navy than from the Cuban campaign or the southern camps.

TABLE IV.—SHOWING THE CHIEF SYMPTOMS IN THOSE ADMITTED.

	Philippines	Cuba and Porto Rico	Southern camps	Navy	Total
Alcoholism	2	3	.....	4	9
Delusions of persecution	25	25	23	18	91
Delusions of exaltation	9	7	8	3	27
Dementia	12	7	12	7	38
Epilepsy .....	.....	2	1	.....	3
General paralysis .....	.....	.....	1	.....	1
Homicidal	2	1	3	.....	6
Hypochondriacal	3	.....	2	.....	5
Hallucinations prominent	4	11	3	5	23
Incoherent	6	10	11	4	31
Mania simple	1	3	.....	1	5
Melancholia simple	10	15	10	9	44
Not insane	1	.....	.....	.....	1
Suicidal	6	3	8	7	24
Unknown .....	.....	1	8	3	12
Totals	81	88	90	61	320

Table No. 4 gives the dominant symptoms as far as these can be classified and the remarkable feature of this table is the large number of cases in which delusions of persecution existed, these being present in no less than 30.5 per cent. of the entire number; of those from the Philippines 32 per cent., from Cuba and Porto Rico 32 per cent., from the navy 32 per cent., and from the southern camps 27 per cent. A word of explanation is necessary, as in many of these cases the term "delusions of persecution" simply means unsystematized delusions of an unfavorable and depressing type, and not those of the typical paranoiac. Eight per cent. manifested decided suicidal symptoms, 9 per cent. manifested exalted delusions, in 7.7 per cent. hallucinations were prominent, and 14.8 per cent. were cases of simple depression.

TABLE V.—SHOWING NATIVITY OF THOSE ADMITTED.

	Philip- pines	Cuba and Porto Rico	South- ern camps	Navy	Total
United States.....	48	60	67	34	209
Unknown.....	5	1	.....	1	7
Total.....	53	61	67	35	216
Foreign born.....					
Austria.....	2	.....	2	.....	4
Bohemia.....	.....	.....	1	.....	1
Canada.....	3	1	1	2	7
Corea.....	1	.....	.....	1	1
Denmark.....	1	.....	.....	.....	1
England.....	3	.....	2	2	7
France.....	.....	.....	.....	1	1
Germany.....	4	2	3	5	14
Holland.....	1	.....	1	.....	2
Hungary.....	.....	1	.....	.....	1
Ireland.....	5	7	4	6	22
Italy.....	1	1	.....	.....	1
Norway.....	1	1	.....	1	3
Nova Scotia.....	.....	.....	.....	1	1
Poland.....	1	.....	.....	.....	1
Russia.....	1	2	1	.....	4
Roumania.....	1	.....	.....	.....	1
Sweden.....	2	1	2	1	6
Switzerland.....	.....	1	.....	.....	1
Wales.....	.....	.....	1	1	2
Total foreign born.....	25	17	18	21	81
Grand total.....	78	78	85	56	297

Table No. 5 shows the nationality of each class and it is a gratifying fact, as showing the composition of the army and navy, that 209 out of 297 were native-born Americans. Even in the navy, 34 out of 56 were native born.

TABLE VI.—SHOWING THE DURATION OF DISEASE ON ADMISSION.

	Philip- pines	Cuba and Porto Rico	South- ern camps	Navy	Total
Under 1 month.....	.....	6	15	8	29
" 3 ".....	9	38	44	20	111
" 6 ".....	28	13	15	14	70
" 1 year.....	7	8	3	2	20
" 2 years.....	1	4	3	2	10
Over 2 ".....	.....	2	2	.....	4
Unknown.....	33	7	3	10	53
Totals.....	78	78	85	56	297

Table No. 6 gives the probable duration on admission but this is doubtless no more accurate than that usually found in the reports of the average hospital for the insane. They are at best only guesses and probably mark approximately the first decided

outbreak of the symptoms. As was to be expected, in almost the entire number in whose cases the duration was known, it was under six months. This makes them a selected and very favorable class as far as prognosis is concerned.

TABLE VII.—SHOWING THE RESULT.

	Philip- pines	Cuba and Porto Rico	South- ern camps	Navy	Total
Recovered	26	48	54	19	147
Improved	1	6	9	1	17
Unimproved	1	.....	.....	.....	1
Died	1	.....	3	2	6
Remaining.....	48	24	19	34	125
Not insane.....	1	.....	.....	.....	1
Totals	78	78	86	56	297

As shown by Table No. 7 our experience has borne out this prediction. This table shows the result thus far in the 297 cases. Of these, to date, 147 have been discharged as recovered, 17 as improved, 1 as unimproved, 6 have died, and 125 remain under treatment. One was discharged as not insane. The recovery rate is thus shown to be at present 49 per cent. of the total number under treatment. . Of those remaining under treatment quite a number have been in the hospital but a short time, 15 arriving April 30th, only one day before the date on which these records were made up.

Of the recoveries it may be said on the one hand that nearly all of them were satisfactory in character, and on the other that there is probably a tendency in discharging a soldier from such a hospital to give him the benefit of the doubt in some instances, and to avoid future complications by a clean-cut discharge as recovered.

Quite a number of those remaining have greatly improved and some are now ready for discharge. A comparatively small number have manifested unfavorable symptoms with tendency toward chronicity and in most of these sufficient in the history is found to account for the unfavorable tendency. Such causes as masturbation, natural tendency and previous attacks are more numerous among them; and a considerable number of them had habits of alcoholic excess or sexual irregularities. I have not been able to make a careful examination of these unfavorable

cases in detail to determine the relation between the result and the cause, and must reserve this for the future.

I am satisfied, also, that the large number of cases classed as acute melancholia is misleading. I believe it would be a more accurate designation to call the larger number of these simple confusional insanity with depression. There was in most of them a history of more or less mental confusion, in many of them this being very marked. That it was accompanied by depression but bears out the usual experience that in primary and simple forms of mental disorder the first emotional disturbance is toward a condition of depression. The large number of cases with ideas of an unfavorable or persecutory character would seem to be due to the environment, the great change from the former life of the person, the presence of the danger of bodily injury and an enemy whose treachery and savage character doubtless made a profound impression on young men just from civil life and who were undergoing their first experience of this character. I am not able to offer any statistics as to the length of service of these 297 cases, but the general impression that I get from conversing with individuals among them is that nearly all of them were new recruits who had entered the army since the commencement of the Spanish-American war. It is rare to find among our patients a soldier whose service dates back many years.

Among the conclusions which are perhaps justifiable from this cursory review may be stated the following:

First. Even with such a careful selection of physical types as usually results from the examination of recruits for the army and navy, it is possible for a considerable number with defective histories as to mental disorder to slip through, no fewer than 13 per cent. of these 297 cases having a history of previous attacks in their own person. Perhaps it discloses the necessity for a little wider latitude in these examinations and the rejection of such cases as show any such tendency toward mental disorder. In a few instances we have been surprised that the degree of evident congenital mental deficiency, now so plainly manifest, did not result in the rejection of the individual.

Second. It would seem that these cases but corroborate our experiences elsewhere in the study of the simple forms of acute insanity, in whom there is the presence of an adequate exciting

cause, which has operated only for a limited period. Barring those cases in whom a tendency was shown toward mental disease by hereditary predisposition or previous attack, we should expect exciting causes which have operated for only a few months in most instances, and are such as produce extreme exhaustion and physical and nervous overstrain, or are the result of the toxic influence of specific poisons like those of fever, circulating in the system for comparatively limited periods, to produce just such forms of mental disorder as we here find. They are comparatively simple in type, the most prominent symptoms are mental confusion and emotional depression, and the pathological conditions are not accompanied by actual tissue degeneration, but are susceptible, in most instances, of almost, if not quite, complete removal.

3d. As to the influence of alcoholism, it would appear that this cause is reduced to a minimum in the army of the Philippines, the total number of cases in which it was given as the principal or a contributing cause of mental disorder being there but five out of an average of 60,000 soldiers for one year.

On the other hand, of the 56 cases of mental disease developing in the navy, in 16 of them alcoholism was said to be either the chief or a contributing cause of the disease. This variation is probably in part accounted for by the different practices of the examining surgeons. In the navy, if a man gets shore leave and goes on a "bout," the tendency is to ascribe whatever mental disorder may follow wholly to the one excess because of its prominence, and perhaps without due consideration of the influence of the prolonged and monotonous service of the man within the narrow limits of life on board ship. While in the army, a greater amount of alcoholic excess, distributed over a longer period, is not so conspicuous, and the other physical causes are more prominent and more often seem to the surgeon to overshadow the tendency toward alcoholic excess.

DISCUSSION.

Dr. EVANS: George H. Savage, in his little hand-book on "Insanity," treats of the effect of war as a factor in the production of insanity or mental derangements. He says that his observation upon the effect of war on the percentage of insanity produced, is that not only does war not act as a causal factor, but on the contrary the development of insanity is in a smaller percentage during a campaign than otherwise, and he admits that

the excitement of the campaign as essentially connected with actual warfare tends to divert the mind from self and instead of acting as a causal factor it tends to brace up the individual, and many who would otherwise lose their mental balance hold it under these conditions. I remember answering a circular letter, but I had one case in my experience in the service of the government that did not return to me, but suicided, and I do not know whether that is included in these statistics or not. It was a case of melancholia that was very depressed and the wife was anxious that he should be dismissed and, inasmuch as he was an old soldier, he was given preference and placed in a position in the steward's department. He suicided. The paper is a very suggestive and good one and I certainly appreciate it.

Dr. RICHARDSON: In reference to suicide, I had from the adjutant general of the army a total of the numerical strength of the volunteer army up to December 1, 1899, and the total strength of the regular army up to that time. That statement includes not only the total strength but also the total loss, and among others the suicides. It was interesting that during that one year in the regular army there were 32 cases of suicide, while during the Spanish-American war among the volunteers there were 12 suicides. I could not understand why there should be so few cases comparatively of suicide among the volunteers, although greatly in excess in numbers.

Dr. EVANS: Dr. Richardson's statistics call to my mind the fact that there enlisted in one of the regiments a man who spent most of the fourteen years just past in an institution for the insane, and he was out probably a year when he was passed into service. I am personally acquainted with the history of five other cases. After the receipt of the letter from Dr. Richardson I paid especial attention to this. There was present in those cases a previous attack or evidence of defective brain structure, so that all that was needed was some extra force to break them down mentally. Probably in the other cases there could be found sufficient evidence to base the deduction that mental disturbance would result from the life in active campaign.

A STUDY IN MENTAL RESPONSIBILITY.

*By Charles W. Hitchcock, M. D.,
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So frequently is insanity set up as a defense in criminal cases, and so flippantly is the term "degenerate" bandied from lip to lip, that the thoughtless readily take it for granted that any evidence of degeneracy, however slight, presupposes a condition of mental irresponsibility.

But although even the scientifically trained may sometimes assume that the presence of undoubted stigmata affords good ground upon which to base the prisoner's innocence of crime, society has not yet reached that sociological plane where a highly-arched and narrowed palate, an ill-shaped ear, or asymmetrical cranial contour are regarded as positively determining mental irresponsibility, despite the fact that in the minds of the laity these points attain too easily to the dignity of conclusive arguments and an assumption of innocence at once follows upon their establishment.

Very attractive, indeed, to the attorney for the defense in a criminal case is a theory whereby any aural, facial or cranial asymmetry lends color, if not certainty, to his ready assumption of the mental obliquity of his client.

In a recent murder trial, in which the defense admitted the killing, it was claimed that the prisoner was "not insane, as that term is generally misunderstood—not a maniac—but insane as thousands of people who are walking our streets," and on such a plea the jury was asked to acquit the author of a most brutal murder. What safety for society exists if, on such gauzy pretexts, murderers are to be set at liberty?

Nor is it to the profession's credit that a medical ally is so readily found, who, for a sufficient stipend, will lend his aid to

build up a defense out of nothing, and that he, by the mere beckoning of his hand, can summon to his aid professional hosts (though largely from among the ignorant and unskilled), eager to testify to the absolute amentia of the vigorously healthy prisoner and to prophesy his early death.

I do not by any means decry the importance of recognized tokens of the degenerate type, nor do I fail to appreciate their proper worth. I even wish to emphasize that they should be most carefully sought for and to accentuate the necessity for most careful and repeated examinations, both mental and physical, and most searching inquiries into the family and personal history of the individual under investigation, his conduct in the ordinary relations of life, his education, habits, associates and environment.

It does, however, seem a consummation devoutly to be wished, that some standard be early established which shall fix, approximately at least, the number and nature of stigmata, the presence of which shall be requisite to confirm a diagnosis of degeneracy. When this is once attained, the time will be ripe for an earnest discussion of the necessary relation of degeneracy to mental responsibility. Certainly, to-day, it cannot be scientifically maintained that all cases of degeneracy afford an unquestionable basis upon which alone a condition of mental irresponsibility can be predicated.

The tokens, both physical and mental, which may be looked for as indicative of the degenerate type, have been well enumerated by writers of ability, but no systematic effort seems to have been made to group the essential stigmata or to establish any definite boundary line beyond which begins a distinct and significant departure from the normal. Our hatters tell us that few or none of us show entirely symmetrical cranial contours, and this is undoubtedly true of other measurements as well.

It seems, therefore, not a vain desire that some standard, clothed with due authority, should obtain, in order that the essential requisites of degeneracy should be more clearly defined and better understood. To his regret, the writer has no helpful suggestions to contribute to establishing either this desired standard or relationship, save as he presents the results of his study of one case, wherein it has seemed to him the evidence of degeneracy (mental stigmata, in this patient) was ample and the

history such that a diagnosis of a lack of mental responsibility legitimately followed.

Mrs. R., aged 34, married, born in this country, of German parentage, had, during most of her seven years of married life, led an existence burdened with domestic infelicity. After one of their numerous quarrels, the husband left the house, thinking such a course most likely to conduce to early domestic peace. Returning late in the evening, he found the door locked, and, after trying it again, went away, remaining absent for two or three nights prior to September 27, 1899. At some time during the night of this date, Mrs. R. administered to herself and her three children morphine pills, and made further ineffectual suicidal attempts by inflicting wounds with a knife upon her left wrist and by taking carbolic acid. The two younger children died as a result of the poison; the mother and eldest child recovered.

The mother was at once placed under arrest, but taken to a hospital to await her recovery from her injuries. She was held on the charge of murder, and the prosecuting attorney, desiring to have determined, if possible, whether she was insane at the time, asked the writer and a colleague to investigate the case with this end in view.

Many interviews, and under varied conditions, were held with the prisoner, as well as with the various members of her family, her husband, the neighbors, and others, in the attempt to get the fullest possible history, which was developed as follows:

Family History.—The paternal grandfather died at 63 of dropsy. The paternal grandmother died at 83, "of old age," but after 40, is said to have been in almost constant fear, for some years, that someone would kill her, while during the last ten or fifteen years of her life she bought and played with rags. She was furnished money to carry on this harmless diversion and collected quite a property in colored rags, which she delighted to arrange, sort over, care for, etc. In other words, she suffered from delusions of persecution for some years, this condition being followed by a terminal (senile) dementia.

The maternal grandfather died at 54, of pneumonia, and the grandmother at 47, having suffered from gall-stones and (probably) pleurisy with effusion. A brother of the maternal grandmother was melancholic and suicided.

Both her parents are living; the father being 58, and having been reasonably healthy until the last eight years. He presents, however, no neurotic history, and appears to be an ordinarily healthy and intelligent man.

The mother is 58, appears to be well-nourished and strong, but says that she has not been healthy—thinks she married too early (17) and had too many children (12). She says that when she was 6 or 8 years of age she was twice brought into the house as dead, having fallen unconscious at play. She recalls that the doctor told her parents that they must be careful of her or she would have epilepsy, but she has had no similar attacks since that time. She has, however, had constant headache from her 12th year, which no treatment has helped. From other and reliable sources, it is learned that she has had repeated hysterical attacks, and that she has been irritable and quarrelsome. Two brothers were the subjects of alcoholism and one sister died of convulsions. The prisoner more resembles the mother in personal appearance and temperament.

Of the prisoner's eleven brothers and sisters, only three are living; one sister, who is fairly healthy, except that she is said to be "nervous" and has habitual headaches; and two brothers, who are reasonably healthy and without neurotic histories.

Mrs. R. had convulsions, "when teething," and up to 5 years of age, had "choking spells." She is said to have been cheerful and amiable as a child, and is not known to have had convulsions after her sixth year, but suffered from nocturnal enuresis up to the age of 16, for which she was frequently and severely scolded. The older sister, who slept with her, said that she would frequently "cry out in her sleep and jump about" so that she made the sister anxious and frightened. These facts are strongly suggestive of nocturnal epilepsy.

The mother does not think that, as a child, the prisoner was peculiar or unusually jealous, although at times she complained that her sister's clothes were better than hers and would intimate that the parents loved her sister better, and would speak of herself as "only a step-daughter;" but this the mother thought was only the peevishness common to children. Eliza (the prisoner) was always very fond of children from her earliest years. There was no especial disturbance of health at puberty, nor until she was married, except that incident to hæmorrhoids,

which were cured by operation. She did well with her music and in school and was highly regarded by her friends among the pupils and the "sisters," under whose charge she was, in the convent.

Of the eight brothers and sisters who died (all under two years), one died at 11 weeks of hydrocephalus, while five either died in, or had had, convulsions. The twelfth child having had convulsions from the age of 4 months to 10 months, at 16 months died after a storm of convulsions lasting a day and a half. This history is so explicit as to admit of no doubt of epilepsy.

The neurotic inheritance of the prisoner is further emphasized by the fact that of her four children all except the eldest have had convulsions and the second child died of convulsions at 3 years of age. Both Mrs. R. and her mother have goitres.

Examination of patient and personal history.—She is a medium-sized woman of rather "stocky" figure, well-nourished, of blonde complexion, with large rings under the eyes. There seem to be no motor or sensory disturbances; the pupillary and other reflexes are normal. No physical stigmata of degeneracy are to be noted.

She is coherent and consecutive in what she has to say and betrays no evidence of delusions of any kind. She talks rapidly and steadily of her domestic troubles, speaking nonchalantly and with a sickly, indifferent smile of her temptation to drown herself and children on one occasion. She avers that she has always been a loving mother, very fond of, and greatly attached to, her children. This part of her story is corroborated by the neighbors and by her mother, who says the prisoner would talk about her children until even she (the grandmother) would tire of the subject.

Her memory is that, with the exception of having hæmorrhoids, she was healthy until she was married, 8 years ago. She was more or less uncomfortable during her first pregnancy, and did not have proper attention, in consequence of which she was compelled to resume her work too soon (3 weeks) after confinement. Her second child was born 16 months after the first and during this pregnancy there was much leucorrhœa and much suffering from resultant irritation. Between her second and third pregnancies, she had two miscarriages, but kept on with

her work, not going to bed. The third child was born two and a half years after the second and the fourth two years after the third. She had lacerations of both cervix and perineum.

She says she has had pains in the lower abdominal region and has been subject to neuralgia in various parts of the body. For the last few years she has had attacks of very severe pain through the body, apparently simulating that of biliary colic; for these attacks morphine pills had been prescribed, and she had taken as large a dose as the doctor had said would be safe, but without effect. She denies ever having had any habit of taking morphine in any form, and says that in all she never took more than a dozen or so of the morphine pills. Those later administered had been purchased for her medicinal use.

She denies any fits, convulsions or loss of consciousness since childhood, but says that she has had "dizzy spells" and had one or more on September 27th. She also had a severe attack of so-called cramps on that day. She has had occasional attacks, "when her whole body was stiff," but has not lost consciousness at these times. She describes these attacks as beginning with a feeling of numbness in the feet, as if they had "gone to sleep," which extends upward, finally involving the trunk and head, when she would become dizzy. Such attacks she had somewhat frequently during the last two weeks she was at home.

She complained of neuralgic pains during her residence in the hospital where she was confined until she had recovered from her self-inflicted injuries. It is learned that she was always more excitable at her menstrual periods and that she was menstruating September 27th.

Her story continually revolves about, and returns to, her husband's alleged indifference to his promises that he would devote himself less to friends and more to her, his frequently going away on yachting trips with friends, his scanty provision for her needs, his being influenced by a sister, who apparently disliked Mrs. R., and who, as she alleges, has been a constant mischief-maker, both before and after their marriage, influencing her husband against her.

His general behavior towards her during most of her married life, together with her own physical ailments, so preyed upon her mind as to make her nearly desperate, and she repeatedly

told her husband that some time he would "come home and find her crazy." She had made threats of harming herself and the children. This she says she did "just to scare him." Indeed, she had on various occasions acted somewhat dramatically, so that her husband had come to consider her many threats as only a part of what he regarded as her "acting," which he thought best to treat with utter indifference. On one occasion, he came home a little later than usual and met a tirade of upbraiding and fault-finding and his wife became greatly excited, finally opening her waist and going out into the yard and lying down upon the sidewalk, only desisting when he started to go away and leave her there. The incident occurred in the evening and during cold weather. She behaved in this way, she says, feeling that if he cared anything for her he would come and take her up and carry her into the house. She has attempted to scratch him and to choke him and he has slapped her face.

On another occasion, after some quarrel, she attempted suicide by placing her mouth over the gas-burner and turning on the gas, inhaling it until she fell down, when the children began to cry. After a little, she recovered somewhat and then began to realize the significance of her act, upon which she promptly opened doors and windows and turned off the gas. On still another occasion she was, as she thought, greatly abused by her husband and humiliated before others by his compelling her to apologize to one of his male friends, whom she had reproached for meddling and attempting to influence her husband to go off with a party of friends, leaving her at home. She then told the husband that if he insisted upon humiliating her, he would not find her alive when he returned. Soon after, she took both children in a small row-boat, notwithstanding the fact that a heavy wind was coming up, and rowed several miles out into the lake to the channel along which large steamers were frequently passing, and where it was dangerous for small boats to be. The water was sufficiently rough to render her position a very perilous one, but she simply put the oars into the boat and allowed it to drift with the wind. She was finally rescued by friends. When asked what she expected would happen, she said with a sickly and indifferent smile: "To drown," having seemingly no appreciation of the real significance of such an intention. At a later interview, when speaking of this occasion,

she said that the childrens' clothes were not even wet; that she might have jumped in, but controlled herself, being perfectly willing, however, that she and the children should drown if the wind or waves overturned their boat.

Her husband is a gunsmith, locksmith, maker of steel dies, etc., and is said to be a very good workman. He admits being very fond of beer and to having been drunk a few times, but says this has seldom occurred, and he vigorously denies being in any way a drunkard. He seems to be a good-natured, fairly industrious sort of a man of 44, and has no appearance of a man excessively addicted to alcohol. He says that his domestic difficulties date from a few weeks after his marriage and that his wife has always been "cranky," fault-finding and disposed to make trouble. He tells of various quarrels, during which she has become very much excited, abusive, and hysterical over causes which were quite trivial, but which her mind magnified out of all proportion to their true or ordinary significance.

Her parents living far from their daughter (on the other side of the city) have visited her but seldom and have known little or nothing of her domestic infelicities until recently. Indeed, the daughter has sedulously avoided talking about her troubles to her parents and intimate friends, striving before them to make her home appear as happy as possible; but to some of her near neighbors she has talked quite freely, so freely and frequently, in fact, that one neighbor said to me that he had thought her to be of unsound mind, because she talked so, and always repeated the same story. She would come to his house and "fairly empty herself," as he said, and always to the same effect; that she cared for her husband, but that he did not treat her well; that she did not know that she ought to love him and did not know what to do; that she was in doubt whether she ought to live with him, etc., etc. She could never get away from her burden of domestic infelicity. She so magnified the importance of the whole matter as to lead even this casual observer to doubt her mental integrity.

The restraining and comforting influences of religion have never been known in this home, the husband denying the existence of a God, the wife only admitting a semblance of belief in a "higher being," but not in a future state.

The neurotic factors here are many and unquestioned, amply

sufficient to produce as their legitimate result the most unstable neurotic organization. It may even be wondered at that she has endured with so much self-control the ordinary stress and strain of life. She is the embodiment in the third generation of an uninterrupted neurotic heredity, and her own unstable make-up is further shown in her transmission of a like taint to her own children, three of whom have been the subjects of convulsions, one dying epileptic. It is admitted that she was epileptic up to five years of age, and a strong probability of later epilepsy is shown in her nocturnal enuresis up to the age of sixteen, and even since. The attacks, of course, are not definitely proven to have been epileptic, but such a history of "night terrors" and enuresis certainly seems to be most plausibly explained in this way.

Of recent years, she has had, with more or less frequency, attacks in which, as she says, her "whole body would become stiff;" these lasted from five to ten minutes. Her description of the attacks leads to the belief that they were quite different from a simple paræsthesia or a vasomotor disturbance. They began with a feeling of numbness in the feet, which passed upward and involved successively the body and head. "When it grabbed the head," as she says, she would feel faint and sick, "just like sea-sick." On one occasion she fell in one of these attacks, when alone in her kitchen, and had evidently come to dread them, having expressed the fear that she might drop the baby during one of them.

These attacks are certainly so suspiciously like attacks of petit mal that we cannot with any positiveness exclude epilepsy, although no attack of grand mal or complete loss of consciousness is known to have occurred after her fifth year. The improbability of permanent recovery from such an epilepsy is too well established to need any emphasis here. With such a history, recurrence would be more than probable.

No evidence of epileptic mania or such mental confusion as might follow an attack of grand mal or a psychic epilepsy is here found. Nevertheless, we cannot lose sight of the fact that the recurrence of any form of epilepsy would markedly and undoubtedly conduce to an extremely unstable nervous state and to decidedly impaired inhibition.

In addition to her epileptic heredity, this unfortunate woman has been subject to neuralgia and recurring attacks of severe pain (apparently closely resembling that of biliary colic), one of which she had on September 27th. She has also suffered from uterine disease. There is a neurotic taint on both sides of her family and it is not to be wondered at if these physical ills grafted on such a markedly neurotic make-up, coupled with long years of domestic unhappiness, imagined unrequited affection, hard work, with a jealous disposition and a life of necessarily very limited horizon, have all conspired to bring her to such a state of mind that she would grasp at any escape; furthermore, she was lacking in any such deep sense of right and wrong and normal inhibitory powers as would deter a normal mind from the act which she finally committed.

Nor can it be said that this was the result of a sudden impulse immediately following a quarrel, for her husband had been away from her for two or three days and nights, pursuing his usual policy of letting her alone until she should recover a better frame of mind. It could scarcely be regarded as a means of revenge upon her husband, for it was not done in the heat of temper and her children were dearer to her than to him.

Her mental make-up, her heredity, her narrow life, all helped to increase her natural disposition to fail to appreciate things at their true worth. Her husband has not been an excessive drinker, at all events not the worthless drunkard she makes him out; he has not of late years been frequently away on yachting trips, which have so preyed upon her mind, but claims, on her account, to have largely given up his sailing friends. The sister-in-law, whom she has so persistently accused as largely responsible for her domestic unhappiness, she has not seen three times in five years, and the husband claims to have seen her almost as seldom, and that on such occasions he had sedulously avoided any discussion of his domestic affairs. In short, her troubles have been magnified out of all proportion to their real significance and greatly distorted by a degenerate mind, which is so apt to fail to grasp and appreciate the right relation of things, and so forms and acts upon false judgments, inevitably reaching conclusions at variance with truth and realities. Indeed, this is the common mental path by which such a degenerate mind brings its possessor face to face with the proposition

to commit some criminal act, from which the defective inhibitory powers, the common inheritance of the degenerate, fail to deter and the act is committed. Just as here, there follows the failure to appreciate the enormity of the crime, which stamps the act of the irresponsible degenerate.

The conclusion seems to me inevitable, after a careful study of this case, that this woman is a degenerate, consequently a defective. That she was apparently normal in the ordinary relations of life, that she was modest and self-respecting, a loving mother unusually devoted to her children, and a good housekeeper, all these facts are in no wise inconsistent with, nor do they militate against, the conclusion that Mrs. R. is a degenerate person. This carries with it the admission that she is not normal. She is evidently abnormal, since she fails in ability to appreciate the true relations of things, and her power of inhibition is subnormal.

She is now, and has been, indifferent to her act, not on account of continued impulses to do criminal acts such as are noted in the habitual criminal. She is not the victim of constant criminal impulses, but was brought to the commission of her act through vicious reasoning, the resultant of inherent inability to rightly appreciate things in their true light. Furthermore, her deficient inhibition failed to give the normal restraint.

To recommend that such an one be held to possess a normal responsibility seems as illogical as it would be unjust. Nor could such a recommendation be justified on the ground that society has not yet so far advanced as to legally recognize that the habitual criminal and the simple degenerate, both members of one great class, should be sequestered rather than punished; for this would be to deny justice to one class because all classes have not yet been accorded equal justice.

The difference between this woman's impulses and those of the habitual criminal is clear and distinct, though both may spring from a certain defect of organization. Her impulses are not the constantly recurring temptations to do criminal acts for the pleasure of the act and the gratification of natural impulses. She has rather, through a long course of faulty reasoning, and because of conditions arising from her tactless behavior based on such erroneous reasoning, reached a conclusion out of all relation to normal proportions, and, believing her condition to

be intolerable, welcomed what seemed to her the only avenue of escape and finally yielded to the impulse to take her own life, seeking to take with her the children, the dearest objects of her affection, and from whom, even in death, she could not bear to be separated. She had no proper realization of the enormity of the crime, and consequently her weak inhibition supplied practically no deterrent force. She is still consistent in her attitude toward the act, not even now recognizing its true significance, bemoaning the loss of the children only because she is separated from them. Her attitude toward the act then and now is that of an irresponsible degenerate.

All are agreed that she is not a safe person to be at large as regards her own good or the protection of society. Punitive confinement, however, such as would be just for a common criminal, is manifestly out of place in such a case, for the reason that it could neither be deterrent nor corrective, the fault here being inherent in the degenerate make-up. Certainly, all demands of justice and propriety are fully met and society is efficiently protected by the sequestration of this unfortunate woman in the State Asylum for Insane Criminals, which the law has provided for such cases (Sec. 19 of Public Act 81, Laws of 1899, Michigan).

A careful study of this case, then, led to the finding that she is a degenerate person, consequently defective and abnormal, unable to appreciate the right relation of things, therefore unable to form right judgments and reach correct conclusions; and that she is also of defective inhibitory powers. From these considerations the conclusion seems inevitable that she is insane, is certainly not responsible for acts due to her faulty reasoning and defective inhibition, and should be treated accordingly.

Evidently the jury took this view, for on January 17, 1900, on the testimony presented, they acquitted the prisoner of the charge of murder on the ground that she was not mentally responsible.

Under a new law, it then became the duty of the court to have her again examined in order to determine whether in any degree her mental unsoundness still continued. The same physicians further examined her and reported to the court that her mental defect was such that recovery could hardly be looked for and it could not with any fairness be said that she was insane

on September 27th and sane on February 1st, although it may be noted that her attorney and friends were now as anxious to have her declared sane as, only a few days before, they had been to have her acquitted on the ground of insanity.

As a result of this report, the court felt bound to commit her to the State Asylum for Insane Criminals, from which she may be discharged, if the superintendent of that institution determines that her recovery is complete.

The writer has deemed the case worthy of report and ventures to hope that his desire for the establishment of some sort of a standard to which such cases shall be made to conform, or by which they may be measured, or which, at least, may serve as a guide and for purposes of comparison, is not entirely utopian or chimerical.*

* June 25, 1900, the newspapers report this woman as returned to her friends, having been discharged from the State Asylum for Insane Criminals "as cured."

PRIMARY DEMENTIA.

By Geo. P. Sprague, M. D.,
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Nearly twenty years ago Spitzka, in his Manual of Insanity, said: "As insanity is, after all, but the symptomatic manifestation of a brain disorder, and the pathological states underlying insanity are not well known, obviously the simplest and most profitable plan of classification will be the adoption of the clinical method as our main guide; then, where etiology, pathology and speculative psychology furnish valuable distinctions, we may incorporate them as collateral aids in such classification."

Believing that this plan is *still* the simplest and most profitable in furthering the differentiation of most pathological mental states, your attention is called, briefly, to a class of cases which, for want of a better name, are grouped under the title of "Primary Dementia."

While the term *primary dementia* is found in the statistical tables of about twenty State hospitals in this country, its symptomatology and prognosis are given so variously by different observers, that definitions seem desirable at the outset. Primary dementia, as understood here, includes all cases of so-called primary mental deterioration, stuporous insanity and pubescent insanity, most cases of katatonia and melancholia attonita, with occasional cases formerly grouped with mania, melancholia, paranoia and circular insanity. This grouping is based upon the teachings of Kraepelin, and corresponds closely to his dementia præcox, except that he hesitates about admitting katatonia to be only a variety of the fundamental disease.

Primary dementia is a disorder which attacks the physically underdeveloped; the mentally unstable; the adolescent with serious insane heredity; the child cursed with over-study and

bodily ills at the time of puberty; occurring, as it does, in individuals of low physical and mental vitality, the disease generally develops in early life.

Among the patients who have come under my observation, less than 15 per cent. have been over 40 years of age, while 50 per cent. have been under 30 years.

Heredity is an important causative factor; in 30 per cent. of my cases insane relatives have been admitted; in 35 per cent. any insanity in the family has been denied; and in 35 per cent. no data as to heredity have been ascertained. The fact that in most cases in which the family history could be secured from disinterested persons, insane relatives have been found, gives force to the suspicion that the inherited tendency exists in more than 30 per cent. of these cases. In fact, Kraepelin gives it as occurring in 70 per cent. of ascertained cases.

Among my patients the number of primary dementias admitted has been 12 per cent. of the total admissions, and the cases have been about equally divided between the sexes. Kraepelin gives the admissions of dementia præcox as 5 to 6 per cent. of the total admissions, but since he classes katatonia separately with the same percentage, his total would be the same as that given here.

Although primary dementia is sometimes engrafted upon a congenital imbecility, a surprisingly large number of patients have been rather above the average in mental capacity previous to the onset of the disease.

Notwithstanding this, however, small or misshapen skulls, asymmetrical faces, imperfect teeth, malformed palates or adherent ear lobules are found more often in this form than in any other of the ordinary insanities.

The *symptoms* of primary dementia are multifiform, and usually begin quite abruptly. With the milder cases we have, as physicians, little or nothing to do, many of the patients not even being considered insane, but only to have suddenly become indolent, erratic or ill-tempered. But the more serious cases make up one of the largest and most discouraging classes of our asylum insane.

Beginning with a few days of insomnia, occipital pain, general restlessness and depression, which gradually passes into exhilaration or mild excitement, the symptom first noticed by the

relatives may be some sudden eccentricity of behavior or speech marking the complete loss of self-control, when the patient rapidly becomes confused, refuses food, becomes mute, or at least ignores questions, neglects his person, removes his clothing, resists every attention, and may even pass at once into a condition of active maniacal violence, a state of depression, or a stuporous condition with catalepsy.

Although a state of depression, a tendency to mania, or to stupor with occasional catalepsy, is apt to predominate throughout an attack, it should be understood that there is not necessarily any regular order of symptoms in primary dementia.

Failure to appreciate this in the past led us to call these cases mania, melancholia, circular, acute confusional insanity, etc., according to the particular stage of the process at the time our diagnosis was made. Excitement, depression, stupor, mutism, verbigeration, refusal of food, negativism, catalepsy, and peculiar attitudes and movements, all occur in a majority of instances at some time during the acute stages. In some cases the three last-named are so transitory as to be seen only by the trained and observant nurse.

Kraepelin states that active sexual excitement is uniformly present, but I have not observed it in more than 3 per cent. of my cases.

The panoramic change in symptoms may be so rapid that every one of the conditions mentioned may be seen within six weeks from the beginning of the disease. The average duration upon admission in my cases has been about two months. In some cases remissions occur, from two or three weeks to six months apart; these may be of remarkable suddenness, and may even simulate recoveries. They usually last for a few hours or a few days, but may persist for months. By the trained observer it will be seen that there is, with each remission, some reduction of mental strength. In the cases which have no remissions, the dementia is even more apparent after active symptoms have subsided. At this time, also, it becomes more clear that the peculiar postures, gait or movements, which earlier may have seemed automatic or accidental, are intentional and due to hallucinations of sight or hearing. While visual and auditory hallucinations are common in the early stages, the latter persist until masked by encroaching dementia.

These fictitious voices may have the form of imperative commands to burn the house; to stop eating; to commit suicide; or murder; etc. I have such a patient now, who has long resisted the repeated order to kill her nurse, of whom she is fond.

Such patients sit in particular spots on special seats; walk in certain tracks indoors and out; get into bed by climbing over the headboard or by crawling under it from the back; sit on the floor or on a table, instead of on a chair; touch or stab the food in a definite way before eating; or show many other similar peculiarities, doing certain acts without change for months or years.

The diagnosis of primary dementia is generally easy after its main symptoms are once plainly fixed in our minds. From acute mania it is at once differentiated by the fact that during active excitement there is always confusion of mind with stereotyped movements. From melancholia it can be distinguished by the stupid or confused condition, or by the plainly superficial nature of the depression with absence of the real melancholiac's plausible, or at least logical and definite, reasons for it. Indeed, the patient with primary dementia often shows during his greatest apparent depression full enjoyment of the humorous side of his environment, and it is common to have him assure you he has nothing to worry him, and does not know why he should be sad.

I have said that primary dementia includes most cases of katatonia, but there are, as pointed out by Worcester in a paper on the "Katatonic Symptom-Complex,"* an occasional case among epileptics and general paretics in which the katatonic symptoms are so predominant for a time as to make the diagnosis very uncertain. As far as my own observation goes, cases of so-called melancholia attonita are simply instances of primary dementia with marked apathy.

Primary dementia is distinct from acute confusional insanity, in which steadily continued confusion, constant fear, blind resistance, and sluggish circulation, combine in making a clinical picture never seen in primary dementia. The most important difference lies in the prognosis, acute confusional insanity being a most hopeful form, while the latter invariably tends to dement-

* The American Journal of Insanity, April, 1900.

tia. In 112 cases of primary dementia which have come under my care, only one has been discharged cured. And this patient became slightly confused and had a vague belief that God did not want her to eat the regular diet within four months of her supposed recovery.

There seems no doubt that early vigorous treatment saves some of these wrecks from the depth of dementia that usually occurs without it. The treatment is symptomatic, and consists in the early use of the nasal tube if food is refused, hypnotics, massage or hot packs if enough sleep is not secured naturally, and the usual tonics, preferably in connection with medicated baths, if the somatic functions be diminished.

Thyroid extract should always be tried and given until its physiological effect is produced, which in rare cases may require grs. xx or more three times daily.

To summarize, there exist a large number of insane persons in whom we can predict, from the moment we make our diagnosis, the appearance of a long array of certain paradoxical symptoms which will after a time subside, leaving the patient in a condition of true dementia.

If this be so, it is highly probable that these cases have a common pathology which should receive more attention at the hands of our microscopists in the future than it has in the past.

DEMENTIA PRÆCOX.

By G. H. Hill, M. D.,

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Dementia præcox is a new term used by Kraepelin in making a clinical study of the forms of insanity. Prognostically speaking there are two kinds of insanity—cases that may end in recovery and those in which the mental faculties are permanently impaired.

Paranoia, paretic dementia, epileptic dementia and senile dementia are irrecoverable. Dementia præcox is applied to cases where the mental faculties become permanently impaired in early life.

Patients of this class have heretofore been described by some authors as cases of primary dementia. In the course of time they settle into a chronic condition and, unless the manner of development is known, appear like cases of the so-called secondary dementia.

It seems very desirable for alienists to persevere in their efforts to determine upon a simple but more uniform classification of the forms of insanity. This will take a long time, it will require close observation, patience and co-operation; but a scientific knowledge of this subject requires this kind of work.

Our professional fathers in this specialty contended that deranged persons are not possessed with devils, nor bewitched, nor mad, but that they are suffering from disease, and, consequently, need kind care and skilful medical treatment. They are patients and require the advantages of a hospital. Ray, Kirkbride, Van Deusen, Ranney, Gray and Godding were pioneers in this work. Their contention for buildings sufficient in size, suitable in arrangement and good in quality, was successful. Although how to secure proper care for all the chronic insane is still a vexed

question in most States of our Union, we now have well-equipped hospitals for the treatment of the acute insane, and competent physicians and trained nurses to minister to them. In most States sufficient funds are provided to carry on this work. During the time that good provision was being secured for the insane, general hospitals multiplied. Physicians have learned how to use the knife and surgeons how to practice medicine. During the last quarter of a century the time required for a medical education has doubled and the facilities for learning the science and the art of medicine are not to be compared with those of olden times. Furthermore, we now have opportunities for studying insanity in a more scientific manner. Since less of our time is taken up in enlightening law-makers and in superintending the construction of buildings, we can with great advantage to our patients, study the causes of insanity, observe the clinical symptoms of the men and women placed in our hands for treatment, make each individual a separate object for research, not only while he is an occupant of the wards of the hospital, but as far as possible from the beginning to the end of his life.

It has always been my purpose to make a post-mortem examination of the brain and other organs of every patient who dies in the hospital for the insane with which I am connected. For many years we have succeeded in doing this; it has only been a few years however, since I have succeeded in getting a sufficient number of physicians on the medical staff of the hospital to enable us to do good, systematic work in our pathological laboratory, and at the same time study mental derangement in the wards of the hospital in a systematic manner. If the physician, who gives the patient a thorough mental and physical examination at the time he is admitted into the hospital, does not already know the family history of that patient, the extent of his schooling, his social, his religious and business life, together with the more prominent characteristics of his nature up to the day of his reception into the hospital, these facts are secured, by correspondence or otherwise, as soon as possible; then an abstract of the history of each patient is read, at an early day, in a meeting of the medical staff of the hospital, and the etiology, the diagnosis and the prognosis in each case are determined, if possible. In order to know the results of treatment in the hospital, it is

desirable, as far as possible, to keep track of all patients after they are discharged.

In undertaking the scientific study of insanity, we are using Kraepelin's methods, and his classification of the different forms of mental derangement as a guide. The understanding is, of course, that the nomenclature used, and the grouping of cases agreed upon, is not final nor surely correct, but only hypothetical and tentative. At the meeting of the Association last year, Dr. Cowles, in a broad and masterly manner, made a comparison of the forms of insanity as suggested by Kraepelin with those which have been most commonly recognized by alienists. Instead of studying insanity chiefly from an etiological or from a symptomatic standpoint, Kraepelin proceeds by keeping constantly in mind and in the foreground the prognosis in each case. Is the patient, whose case is being studied, likely to recover? Is the nature of the case such that the disease from which the patient is suffering can be cured? Is the restoration, which results from medical and mental treatment, a complete one of the body and of the mind? Is the cure which results from treatment permanent? In going over our case-books and in calling to mind as far as possible this patient and that patient and every patient discharged, five, ten or twenty years ago, do we find that they are still living? Have they remained permanently absent from the hospital in a capable and stable frame of mind? If they have suffered from subsequent attacks of mental derangement, were their minds sound between the attacks, and what were the results of subsequent treatment in such cases?

For ten years Dr. Pliny Earle made extensive inquiries and calculations as to the curability of insanity. In summing up his work in this direction, in 1886, he says: "The most general conclusions to be derived from the statistics included in this study are, first, that the old claim of curability in a very large majority of recent cases is not sustained, and that the failure to sustain it is more apparent and more striking than at any preceding time; and, secondly, that the percentage of reported recoveries of all cases at the hospitals in this country continues to diminish." Although fourteen years have elapsed since Dr. Earle made this statement, and although insanity is much more skilfully treated than ever before, yet I am of the opinion that

permanent mental impairment is present in a large proportion of patients discharged from our hospitals as cured.

The object of this paper is to suggest that alienists ought to persevere in their efforts to secure a scientific nomenclature for the different forms of insanity. This can be done partly by individual observation and study, partly by co-operation and a consensus of opinion. The general terms descriptive of various forms of insanity, which have been most used, are melancholia, mania and dementia. To these, names for special forms have been more recently added, such as paranoia, general paralysis, epileptic insanity and alcoholic insanity. The tendency of late has been to differentiate cases of dementia. Since there is permanent mental impairment in epilepsy, the condition may properly be called epileptic dementia. Again, general paralysis is incurable and usually progresses from bad to worse rapidly, so it is now characterized as paretic dementia. Furthermore, it is easy to group cases of mental impairment which develop late in life, and are due to failure of the faculties on account of age, as senile dementia.

There is still another method of grouping demented persons. All cases in which the first symptoms of insanity are dullness or weakness of mind, and when these symptoms persist as the most prominent ones, are called instances of primary dementia; and when the case is first diagnosticated as mania or melancholia or some other form of insanity, but finally the faculties are permanently lost, the condition is termed secondary dementia. Now, according to Kraepelin, cases formerly called primary dementia, and many others, should be named *dementia præcox*.

This is one of the processes of deterioration; the other is *katatonia*. Both of these conditions of weak-mindedness develop early in life, in the teens or in the twenties; seldom are they found in patients advanced in years. Organic changes in the brain are believed to be present, and the mental derangement resulting therefrom varies from the slightest impairment of the mind to the most complete dementia. Kraepelin defines *dementia præcox* as the evolution of a simple, yet more or less well-marked, mental deterioration, having the appearance of an acute or subacute mental disturbance. There may be only a slight manifestation of mental weakness, so that neither the relatives

nor the family physician regard the condition and the behavior of the patient as indicative of insanity.

A son or a daughter at home loses interest in study, drops out of school or neglects work, formerly well done, and lounges about the house. No delusions are present, the case is not considered acute or critical, the individual makes no particular trouble, may continue to perform some simple tasks about the house and so long as fostered can dwell under the parental roof; but there is definite mental impairment which is permanent. More marked cases of dementia præcox exhibit silliness. The subjects talk to themselves more or less incoherently; they smile or laugh without provocation; they are positively indolent; they are careless about their personal appearance and sooner or later may become filthy in their habits. A contrary disposition is not infrequent, and mischievousness or viciousness may be manifested. If such persons become burdensome on account of straightened circumstances in the family, or if the old home is broken up by the death of one or both parents, such a child is sent to a hospital for the insane or to the poorhouse. Self-abuse is often assigned as the cause of the insanity in such cases.

Under the head of dementia præcox Kraepelin places the cases of certain beggars, tramps and dead-beats, who eke out an existence for a time, but finally land in the poorhouse.

As a rule dementia præcox begins insidiously, but the mental change may come on quite suddenly and the patient may realize that there is something serious the matter with him. Headache, dizziness, or other discomfort may not only be realized by the patient, but be complained of to and receive attention from the home physician. The patient may be restless at night and inclined to keep his bed in the daytime. Food is taken with indifference and possibly regarded with suspicion. Mild and transient hallucinations or delusions may be present. The patient may accuse himself of having bad qualities or say the neighbors are talking about him. Although he appears well he may spend his time in scribbling or fill a long manuscript with nonsense. The sense of decency may be lost and neighbors declare the person to be a nuisance. At times there may be restlessness and excitement; this condition may occur at the menstrual periods or when the patient is restrained on account of disorderly conduct. Some persons who pass into a partially de-

mented condition enjoy perfect bodily health for many years. If well managed, they make good helpers in hospitals and on poor farms. Other patients rapidly deteriorate into a state of complete helplessness. They eat in a greedy or slovenly manner, or take food sparingly or not at all; they may hold saliva in their cheeks or drool upon their clothing; they may retain their excretions or pass them involuntarily. Such persons, when neglected, may acquire most disgusting habits. Some patients soon die of tuberculosis or some other intercurrent disease. Others live many years and in classification may get mixed up with the mass of so-called cases of secondary dementia.

Cases of dementia præcox can only be differentiated by knowing the early history and by continuing observations long enough to determine the course the mental derangement will take. Kraepelin believes that dementia præcox is a very common form of mental derangement; that it usually develops early in life, between the ages of sixteen and twenty-two years; that it is more common in men than in women; that hereditary influence is well marked; that the original endowment of the patients is usually good, in some cases considerably above the average in mentality; that the true nature of dementia præcox is still obscure; that it may be due to imperfect brain structure, so that mental activity and development cannot be sustained, but that more probably it is the result of positive brain disease, since it occurs before mature age has been reached and produces permanent impairment.

My understanding of Kraepelin's classification of the insane is that patients do not change from one type of insanity to another, but that the symptoms in the various stages in each case must be known before the diagnosis in doubtful cases can be made. Hence, it is necessary to continue the clinical study of this subject for a long time before permanent, scientific conclusions can be reached.

DISCUSSION.

Dr. DREW: These two excellent papers emphasize the desirability of having a classification recognized as official by this Association, and I believe with the essayist that the simplest classification is the best. There is a certain disadvantage, a practical disadvantage to those of us to whom English is the mother tongue, in getting away from the English forms and

adopting the classification of an author of whose works we have no translation, so far as I know. I am constantly being asked how many cases of adolescent or pubescent insanity are included in the cases of dementia præcox, and what is the relation of dementia præcox to primary dementia. In Dr. Cowles' excellent paper of last year, primary dementia with katonias were made subdivisions of dementia præcox. This classification I understood harmonized with that of Kraepelin. Dr. Sprague, it seems, uses primary dementia as synonymous with dementia præcox. As English and American authors describe "primary dementia" limited to a much smaller class, I consider this confusing and objectionable. I understood from Dr. Hill's paper that he would include such cases as we call congenital mental deficiency. I suppose he would include such a case as was the subject of Dr. Moulton's paper, in dementia præcox. We find the same class of cases as described by English and American authors as pubescent and adolescent insanity, etc., and it seems to me that for the sake of simplicity this society should adopt some classification that we can depend upon, not a classification that should be permanent and fixed, but one which should be varied each year. We have had excellent papers upon the subject in the last few years, and it seems to me to be desirable that we should come to some understanding and include all the advanced ideas in some classification which could be changed and varied each year as new light is given us.

Dr. RUNGE: The difference between dementia præcox and primary dementia is slight and we can discuss them together. The most difficult thing for me was to obtain some place where I could put my doubtful cases. I personally have not the time to work out any new schemes, either as to classification or scientific research. In going through the wards there are many cases which puzzle us, and we do not know how to classify them. I have found dementia præcox a very comfortable, I may say vulgarly, dumping ground. Nobody will conclude that the last word on the subject of classification has been said. It takes time to work this out. It corresponds with the experience we have had with dementia paralytica. We have cases beginning as simple neurasthenia, brain exhaustion, and it is at times difficult or impossible to arrive at a diagnosis. And so in dementia præcox, the cases begin sometimes just exactly in the same way and we have to await sometimes the development of the cases before we can make our diagnosis. After knowing the prognosis we make the diagnosis of the condition, that is in some cases. I think there is a great deal of analogy between the two conditions. Dementia paralytica is due to organic changes and the other also is due to changes which are probably organic in character. There is a progression in both conditions. They seem to get hold of the patient and just simply grow, whatever the psychic manifestations may be in the individual case. This classification gives us an opportunity to put away the cases which we have found to tend to dementia and which still seem to us to differ in their clinical aspect. I have also found a great deal of satisfaction in the third form of Kraepelin's dementia præcox, the so-called paranoid form. There are many cases classified as paranoias which do not belong to that class. Some cases cling to their delusions like to a rock until

they die. They are very interesting cases but they are rare. Then as to those cases which have a strong tendency to degeneration sooner or later, it was a positive comfort to me to separate them from the cases of true paranoias. Some become paranoiacs and others demented, and there may be various other changes, but they are paranoiacs when they die, while the cases of dementia præcox do not become paranoiacs but become demented. This very much simplifies the work of those who are obliged to adopt the work of others for their own use.

Dr. HARRINGTON: We are all indebted, I think, to Dr. Sprague and Dr. Hill for bringing this subject before us. The classification of which we have just heard has led, wherever it has been adopted, to a greater scrutiny and a more thorough examination into the clinical symptoms of the mental diseases with which we meet. We have used the classification of Kraepelin at Danvers for some little time, and what we notice about our cases, as they appear in the tables of our annual reports now, is that our cases of acute mania and acute melancholia and acute confusional insanity have diminished in number, while the cases of "primary dementia" have increased. If we go back to the old reports of previous years we will find many cases of acute mania and acute melancholia and a smaller number of cases of primary dementia. This means, I think, that in our study of cases as they come before us we are enabled by a closer scrutiny to recognize the signs of dementia at a very early period. The teachings of Kraepelin cause us to look at the mental manifestations which we see before us not merely as episodes, but induce us to try to determine how certain manifestations may have a bearing upon the life history of the individual. Dr. Sprague has stated very succinctly the symptoms and indications by which this form of mental disease may be recognized at the present time.

Dr. PAGE: Regarding these two papers on the same general subject, but under different headings, I believe the choice between primary dementia and dementia præcox may be a matter of individual preference. Both terms are appropriate. Personally I prefer the term dementia præcox, because it is less likely to lead to confusion with former classification.

The old method of identifying cases of mental disease according to the emotional manifestations—a phase of the disorder more or less transitory—and classing them under heads of mania and melancholia was arbitrary. But this scheme, advanced by Kraepelin, is one which takes a broader view of the cases, covering their inception, progress and termination. The cases properly diagnosed need never be transferred from one class to the other. To my mind it is a great advantage to use terms in designating forms of insanity which will give us a mental picture of the whole course of the disease and sufficiently inclusive to admit of certain variations.

All appreciate the great advantage there is in using the term parietic dementia to describe cases which may present wide differences in emotional and other particulars. In time all alienists will, in my opinion, recognize how very appropriate the term dementia præcox is when used to designate cases of that large class of the insane, who, from the inception of the disease, manifest a degenerating process, which progresses more or less irregularly,

manifesting various mental and emotional symptoms from time to time, but which, when viewed in their broader manifestations and results, conform to the general mental picture which we have in mind when we use the term dementia præcox.

I believe the Kraepelin system of classification will eventually prevail. In a Massachusetts hospital where I was formerly superintendent, this system was partially adopted, and the present superintendent informs me that it is now fully adopted there. It is now, also, fully adopted at the Hospital for the Insane at Middletown, Conn., where there are about 2,000 patients, with a staff of nine physicians. The majority of these medical assistants have had a comparatively prolonged experience in the care of insane, and in the past they have carefully studied the cases, classifying according to the best English methods. Since the adoption of the Kraepelin system, a year ago, every new case is made the subject of a clinic before the full staff, meetings for that purpose being held daily, and the various assistants alternating in taking charge of the clinic.

After a year's work according to this method of study and classification, these gentlemen have found a fresh interest in the study of insanity, and more satisfaction than ever before in classifying mental diseases. All consider the Kraepelin system a great advance over previous methods, both as regards classification, general management and clearness of the distinction between the several forms of mental affection.

Dr. TOMLINSON: I feel on the subject of classification like the Tammany politician is said to have expressed himself on the subject of reform. It does not seem to me that the time has yet come for us to formulate any other than a tentative arrangement of the symptom groups in which mental disturbance is manifested. So far as the general tenor of the papers under discussion is concerned, I have no criticism to make, if the writers will substitute the word degeneration for the word dementia. I look upon dementia as a general process, common to all forms of insanity, progressive in its course and nature, and dependent upon the degree of defect in the nervous structure of the individual for the time of its appearance and the rapidity of its progress. That is, the insane who do not recover or die become demented and mental reduction in some degree is present in all forms of mental disturbance, and, as would be expected, is most marked in those who become insane during adolescence or in senility; because during adolescence primary degeneration is most common, while in senility disintegration is a natural sequence. Furthermore, the manifestations of mental disturbance accompanying the progress of dementia during adolescence do not differ from those present in senility, except as the environment of the individual differs at these two stages of his existence. When the time comes that we cease to clothe our speculations concerning mental perversion in the terminology of metaphysics, realize that there is something to pathology besides morphology, and pay more attention to the concomitant degenerative processes going on in the vegetative organs of the insane, we will be in a position to more clearly appreciate what is constituted in insanity and establish its classification.

FOOD AND DIETARIES IN HOSPITALS FOR THE INSANE.

*By W. H. Kidder, M. D.,
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In furnishing food to the population of an institution for the insane we have not only to provide for the actual sustenance of the individual members of that population, but to give to them a diet which shall aid in inducing in the highest possible degree conditions of bodily and mental health. This at once implies that the food shall not only furnish the proper nourishment but shall also give to the individual satisfaction and enjoyment. In these matters, however, the consideration which is shown to the patient and employee in the hospital must of necessity be tempered by regard for the principles of the economist and the welfare of the tax-payer. While the great majority of the insane are maintained in public institutions entirely at public expense, there seems little desire to look upon and treat them as paupers. To be sure, among them are many true representatives of the pauper class, but we do not, because of these, jeopardize the interests of individuals of a higher grade. We are thus burdened with the obligation of providing a diet which shall be physiologically healthful and nutritious, palatable and attractive, and which shall involve only such an expense as the dictates of a judicious economy shall determine.

One of the first steps toward the recognition of the desirability of harmonizing the questions of physiological demand and monetary economy in diet was made by the New York State Commission in Lunacy when, to meet the exactions of the newly adopted estimate system it, in 1893, asked Prof. Austin Flint to prepare a report on "Dietaries and Food Supplies for the Guidance of the New York State Hospitals in the Preparation of their

monthly Estimates." Recommendations were made by Professor Flint and followed in the hospitals. At the end of a year, after having examined written reports submitted to the commission by the superintendents of the various hospitals, the author revised these recommendations. The sufficiency of the ration indicated in the original report was fully demonstrated and the revision showed a tendency toward slight reductions. As subsequent experience has demonstrated, the hospitals are indebted to Professor Flint for the care with which he avoided too restrictive limits and for the liberal views which he expressed. The present high standard to be seen in the New York State hospitals for the insane is a testimonial to this.

The State Commission in Lunacy did not allow its interest in the question of diet to end with the successful establishment of the ration recommended by Professor Flint, nor did the superintendents accept that ration as the omega in the alphabet of dietary improvement. Attention was at once given to the betterment of the service in the kitchens and dining-rooms. Here was no light task. In the kitchens the cooks were, too often, people without extensive training in their art and of sharply drawn mental limitations, and a small number had to prepare food for large numbers of people of diverse classes. In the dining-rooms the service had to be so arranged as not to interfere with the workings of other departments of the hospital. In many cases some of the attendants had to eat at the same time as did the patients, leaving for the service of the latter only a small quota of waiters. The increase of attention to these various things has unquestionably led to improvements and economies, and a logical development has been a renewal of inquiry regarding the ration.

In his first report Professor Flint expressly stated that the schedule of allowances therein contained was necessarily somewhat experimental, as he had "found no dietary tables in use exclusively for the insane, either in Europe or the United States." Attraction of the attention of Doctor Wise to the reports of the work being done under the direction of Prof. W. O. Atwater, led the State Commission in Lunacy to call upon Professor Atwater to commence with the fiscal year 1898-'99 a series of inquiries to determine, if possible, what are the actual physiological dietary needs of the insane. The work of Professor Atwater

has attempted to find not only the actual amounts of nutrient principles, protein, fats and carbohydrates, consumed by the various classes of people in a hospital for the insane, but also to determine the actual quantities of these principles which are needed to support the various classes in the best conditions of health, and to learn the best and most economical sources from which these nutrients are to be obtained. At the commencement of the present fiscal year Professor Atwater brought to his aid Miss Maria Daniell, whose reputation as an authority in matters of food economy has been widely established. Miss Daniell has made her headquarters at the St. Lawrence State Hospital, there developing simple principles and processes of cookery by which the hospital population can be given a sufficient, varied and attractive diet at a moderate expenditure of labor and money.

To discuss, even in a cursory manner, the various purposes, phases and results, attained and prospective, of this inquiry, would alone require a paper of greater length than I am able here to give. I will only say that we who are interested in the undertaking believe that it is opening up a broad and comparatively new field and that from it will come many developments of value, both scientific and practical.

In the New York State hospitals the present ration allows of

Farinaceous foods	12.75 ounces
Meats and fish.....	10.20 "
Butter	1.50 "
Cheese.....	40 "
Sugar.....	2.00 "
Coffee .....	.50 "
Tea ..	.12½ "
Milk.....	16.00 "
Potatoes	12.00 "

With this is a variable allowance of fresh and dried fruits based on a money allotment of three cents per week per capita. This ration represents decided reductions from that first recommended by Professor Flint, yet we would question if any close observer could find grounds for concluding that the patients actually consume any less food now than in years when a more liberal ration was allowed. Improvement in kitchen and dining-room service at once explains this seeming paradox. With better service absolute waste has been lessened, a smaller amount of food has been rejected at the table and a smaller ration has been

found sufficient. From my own observations in particular dining-rooms I incline to the belief that with the improvements in the preparation and service of the food the patients actually consume more than formerly. A table of ration allowances should be, and in New York State has been, a development from long observation of the actual consumption of food in the hospitals.

The ration table is developed from the dietary schedule, not the schedule from the ration table. The schedule represents the demands of the people to be nourished; the ration table, the allowance to meet those demands.

In arranging a dietary schedule we must bear in mind that it should call for food materials which are obtainable. It should provide nourishment with nutrient ingredients of the kinds and in the proportions best fitted to the actual needs of the persons to be nourished. To this end a distinction should be made between the wants of the different classes. The relation of cost to kind of nourishment should be carefully considered. It should be simple enough to allow the cooking to be well done by such employees as are actually available. In short, there are two things to be sought—the welfare of the patient and economy of administration.

In a hospital for the insane we may, for convenience in arranging dietary schedules, classify the population somewhat as follows:

1. The non-workers, including the infirm and aged, the idle and the mildly restless and disturbed chronic cases.
2. The workers, including those actually engaged in productive employments and those whose activities make them need a hearty diet.
3. The acute and recoverable and the sick, chronic patients.
4. The employees.

A fifth class, the officers, might be given. However, their numbers are small and they will not here be considered.

Dietaries for the infirm admit of the greatest simplicity. The workers and employees require more substantial food, while the acute and recoverable and the sick should have such a diet as will conform to the ideas of treatment followed by the attending physicians. As in nearly all hospitals one kitchen supplies food to more than one class, it is necessary to so arrange the

dietaries that the more simple shall form component parts of the higher ones.

The basis of a breakfast should be some "cereal" with bread and butter. For the infirm no meat is necessary. For the other classes a small quantity in the form of some warm preparation will suffice. Cold sliced meats should seldom, if ever, be served at breakfast. The meat allowance at this meal being small, it becomes necessary, in order to keep up the ratio of protein, to use for the cereal some preparation of oats or wheat. This cuts out hominy and other corn products. They can find appropriate use in the dinners and suppers. If a food, in which carbohydrates predominate as much as in corn, is served for breakfast, to give a proper nutritive ratio for the day requires a maximum amount of protein in the other meals. This makes the balancing of a dietary a complicated task. Adherence to the use of vegetable proteids for breakfast insures a sufficiency of that valuable nutrient agent for the day. The workers and employees should have some meat dish, a hash, minced meat, creamed salt fish, or dried beef, etc. The employees may also have toast or hot muffins.

The following are types illustrative of breakfasts for each of the three classes:

Class No. 1, Infirm—Oatmeal, milk or syrup, bread, butter, coffee.

Class No. 2, Workers—Oatmeal, milk or syrup, bread, butter, coffee, corned beef hash.

Class No. 4, Employees—Oatmeal, milk or syrup, bread, butter, coffee, corned beef hash, hot muffins.

The value of these breakfasts will depend not only on the care shown by the cooks in the preparation, but also on the character of the dining-room service. Take as illustrative the breakfast served to the workers. If the hash and oatmeal are put before the patients at the same time, a small percentage of them will first eat their hash, consuming a large quantity or complaining if they do not get such amount, and will leave the oatmeal untouched, especially if milk is not served with it. If, on the other hand, the oatmeal is served first and a definite time allowed for its consumption, the large majority of patients will partake of it and will later relish and be satisfied with a reasonable allowance of the hash or other meat dish. The eating of a

cereal for breakfast is a pleasant, healthful and economical habit and should be developed in those not already subject to it.

Here let me say that in a dining-room service attention to the individual, in its best sense, does not always mean serving to that individual the thing for which he is most anxious in the quantities which he craves, but rather the supplying of such things as reason indicates are best for his physical and mental well being.

DINNERS.

For the infirm the mid-day meal should be the only one containing a meat preparation, and, even in this meal, meat need be present no more than four times each week. The other classes require a more liberal meat allowance. There are available three fairly well defined types of dinners, as herewith illustrated:

Class No. 1.

- a. Pea soup, bread, bread pudding.
- b. Baked beans, bread, chocolate blanc-mange.
- c. Mutton stew, potatoes, turnips, bread.

Dinners *a* and *b* are to be served in courses, a time limit being set for the consumption of the soup and beans and then the dessert served. The infirm need never have meat with a soup or with beans, unless, as in some hospitals, the meat be given shredded in the soups. The above noted stew corresponds somewhat to this plan.

The same dinners elaborated for the workers give us results as follows:

- a. Pea soup, braised beef, bread, bread pudding.
- b. Baked beans, boiled potatoes, brown gravy, bread, chocolate blanc-mange.
- c. Mutton stew, potatoes, turnips, bread.

For the workers *c* is the same as for the infirm, but more meat proportionately can be served to the individual.

For the employees, we make still further changes:

- a. Pea soup, braised beef, potatoes and gravy, bread, butter, bread-pudding.
- b. Baked beans, pork, boiled potatoes and brown gravy, bread, butter, chocolate blanc-mange.
- c. Mutton stew, potatoes, turnips, bread, rice-pudding.

The pork served in *b* is that cooked with the beans, the amount needed to flavor the beans for all being just about enough to provide meat for the usual proportion of employees.

SUPPERS.

The infirm need no meat for supper. For the other classes cold meats should occasionally be served, but they should be sliced thinly and never served in unattractive chunks. As types of suppers we may take:

For the Infirm.

- a. Bread, butter, apple sauce (fresh or dried), tea.
- b. Fried or baked corn-meal mush, syrup, bread, butter, tea.
- c. Bread, butter, ginger-bread, tea.

For Workers and Employees.

- a. Bread, butter, macaroni and cheese, apple-sauce, tea.
- b. Fried or baked corn-meal mush, syrup, bread, butter, meat cutlets, tea.
- c. Bread, butter, ginger-bread, cold corned beef, tea.

With a dietary schedule arranged on the principles illustrated by the foregoing meals, the preparation of food for different classes of patients in a single kitchen becomes a comparatively simple matter. There is the widest opportunity for the exercise of ingenuity in varying the dishes named in the schedule. It will be found that the appreciation given to a dietary will, in no small measure, depend upon its variety and freedom from routine repetition.

Efficient work in the kitchen, unless supplemented by a good dining-room service, may still leave the patient's appetite meagerly satisfied. The two services are interdependent and should be organized upon that basis. They should correspond not only in exactitude of times, but in all details. One of the first problems is to so arrange the meals that the maximum number of attendants can be employed in waiting upon the patients and yet give opportunity for the attendants themselves to obtain their meals. This must all be accomplished within periods of time of such narrow limits as not to interfere with the workings of other departments of the hospital. An excellent arrangement is to separate the employees into two divisions, one division to be served with its meal before the patients eat, the other afterwards and all waiting on table during the patients' meals. This arrangement is compatible with the saving of the time of the attendants for other work, though at first thought it seems that it might interfere with working parties and other assignments of attendants. Breakfasts and suppers being, as a rule, simple meals, are easily served. The active work of the

service is very sure to come within the first half of the time devoted to the meal. It is sometimes advisable at that time to excuse the division of attendants which has not yet eaten and allow them to go to their meals. Without materially detracting from the efficiency of the service to the patients, this accomplishes an economy of a few minutes.

The establishment of the meals upon time limits is to be particularly urged. Not only should the patients remain for a definite time at the tables, but, whenever practicable, the meal should be divided into courses and a definite time allowed to each course. This last ruling tends to break up prejudices concerning particular foods, which we so commonly see in individuals among the insane. That person is likely to be contented and happy whose habits are normal and logical, and I would repeat what has been before alluded to, that care should be taken to develop in the patient normal and logical habits at the table, efficiency of service to the individual often meaning guidance of that individual.

In determining the ratio of supplies to be allowed to the population of a hospital and in the cooking of those supplies for any given class we are guided, in the quantities we use, by the wants of the average individual. Later, however, when we serve the food in the dining-room, we must give attention to the particular individual. In order that this may be done, the person who deals out an individual portion of food must know to whom that portion is going and must have a fair idea of his needs. To be sure, in some hospitals there are small dining-rooms where the plates are carried to the patients from a single serving table, having been filled by a person who knows not to whom any particular plate goes, and where the waste seems not to be excessive. Where the same practice obtains in large dining-rooms, the results seem less satisfactory.

Efficiency and economy in the commissary department of a hospital means not simply a proper ration allowance to the individual or the careful cooking of the dishes indicated in a well arranged dietary schedule, but rather a co-ordination of the workings of all of the sub-departments which contribute to the supplying of food to the population of the hospital. The farmer, gardener, store-keeper, butcher, baker and workers in the kitchens and dining-rooms must all see, not only that their own in-

dividual tasks are well done, but that each makes his work a supplement to the work of the others. In this the perversion of the interests of economy can be illustrated if we suppose that the hospital gardener knows how many bushels of beets or carrots or turnips he can be fairly sure of producing from an acre of land but has no definite idea of the total ration allowance of these various vegetables needed and no exact knowledge as to how great an area of each he had best plant, convenience in his own department having been his chiefest guide. Without attention to all these simple but practical details, scientific adjustment of the ration to the physiological needs of the patient, and improvement in methods of kitchen work, will add to the value and attractiveness of the diet, but will not accomplish the best results in economy.

Finally, let me allude to one of the ways in which, recently, attempts have been made to improve especially kitchen administration. In several of the New York State hospitals thoroughly efficient teachers have been employed to give to the cooks courses of instruction. Where this has been done, the value of the results is not to be questioned. In the Long Island State Hospital at King's Park one step further has been taken, and, in the place of a *chef*, there have been secured the services of an educated and scientifically trained person, a graduate of Drexel Institute. This can well be regarded as one of the most important advances recently made in the line of dietary improvement. It insures better cooking and greater variety of dishes, in fact, a widening of the scope of the work of the hospital cook. It also brings to the nurses such tutelage as they need to make them efficient caretakers of the sick. It will also, we hope and expect, tend to subserve the interests of economy.

DISCUSSION.

Dr. WISE: The hour is so late I dislike to prolong the session, but I think I am justified in taking a moment of time to add one or two explanations to Dr. Kidder's paper. I regret exceedingly that he has not referred to several scientific aspects of the subject with which he is so familiar. When Professor Atwater undertook this work, after a preliminary examination of our needs, he said that there would be no necessity for assistants, provided he could have the help of one or two assistant physicians, their selection to be made on their education and qualifications, who might devote their time to this work. Dr. Kidder was selected because of his preliminary qualifications, his methodical habits of study and his attention to details, and the

matter was broached to him with success, as you know. Thus there is to be added a new specialty, that of scientific food expert, and I have no doubt Dr. Kidder's time will be taken sufficiently to enable him to devote the rest of his life to this work. When we get through with him in New York, although I do not know when that will be, I have no doubt the other States will call him and use the experience gained with us to their great advantage. I am sorry, however, that he has not given in definite terms some of the experiments made in New York. I think they will surprise you as they surprised me, and even yet I am skeptical. Nevertheless, the persons who made them are so reliable that I should not doubt. Dr. Mabon has the subject at his tongue's end, and I hope he will take time to name one of them at least. Professor Atwater, before undertaking this work, was labored with for some time in order to induce him to undertake it. You all know his reputation as a food expert. I suppose he is now considered the superior of the Germans, who, until recently, have been paramount as authority on food problems. He commenced the work in New York by making some preliminary studies, and in order to do so he took the actual food experience of three or four hospitals and got samples of food in actual use and subjected them to analysis. He then made a formal report to the commission that he considered that the hospitals were using about twenty or twenty-five per cent. in excess of the actual needs for the classes of patients they were caring for. Since that time he has properly reduced that estimate. In taking the food consumed, including the wastage, he found in the experience previous to 1896 (that does not apply to the last calendar year) that there were about four to five thousand calories daily per capita used in the hospitals against an average of three thousand as used by the German army. In comparison with the American soldiers it was about 20 per cent. excessive. He believed that the various classes of the insane might be considered to require about the same nutritive value as the soldier in times of peace. Of course, there are no data in existence on the food requirements of the insane, except such incomplete records in New York made recently and unfinished. Criminals have been studied and every other class of defectives, as well as persons in communities, but such data on the insane are not to be found. We expect to go on with this work in New York, and we expect that Dr. Kidder will probably in a short time supplement Dr. Atwater, or, at least, be competent to supplement him in this particular work.

DR. MABON: Owing to the lateness of the hour, I do not care to take up the time of the Association with a prolonged discussion of this valuable paper, but would like to emphasize one or two points about hospital dietaries.

The only basis I have for discussion is one of practical, personal experience. When the diet studies were first undertaken at Ogdensburg, I was rather skeptical, but the work has progressed so far now under proper conditions, and with the right sort of people in charge, that I am satisfied that there is not only an improvement in the character of the food served, but also a marked improvement in the preparation of the food, with a diminution in its cost. Most of our experimental work has been done in connection with the infirm class, and we supply these patients with a more varied

diet than we ever did before, and with one that represents a higher nutritive value. It may be said, incidentally, that there is less waste in the dining-rooms and kitchens than formerly, and this probably results from the closer personal attention that has been given to this important branch of the hospital service. It is my belief that each State would save money and provide a more satisfactory diet for its insane if the matter of food was under the immediate supervision of a person who is familiar with the chemistry and physiology of foods, as well as with the practical needs of the dependent insane. Such a person could outline the ration allowances of the different classes of foods and could furnish sample dietaries from time to time, giving receipts for the preparation of the various articles. In order, however, that this work should be done properly, he should have as an assistant some woman who has taken special courses in household economics and who is familiar with the art of preparing food so that she could direct the cooks in the various institutions along the lines suggested by her immediate superior.

We began this experimental work at the St. Lawrence State Hospital in connection with the infirmary, where over four hundred patients are cared for. With this class we demonstrated that a considerable saving was accomplished. We found, however, as the work was extended to the other classes, that the saving was not proportionally so great, but it was sufficient to indicate that when once it is placed upon a practical working basis and has passed the experimental stage that the saving will be large enough to warrant the employment of a competent food expert and assistant. Furthermore, I believe that if no saving was brought about the greater satisfaction expressed by our household would justify the employment of someone who could give the entire matter of food supplies scientific supervision.

I trust that this paper of Dr. Kidder's will be a stimulus for other States to take up this work, and thus make it possible for the insane to have a scientifically constructed dietary, and one that will do away with much of the criticism which obtain in almost every institution.

GUARDIAN SOCIETIES FOR THE INSANE.

By Jules Morel, M. D.,

Medical Superintendent of the State Asylum, Mons, Belgium.

At the twenty-sixth National Conference of Charities and Corrections, I had the honor of presenting a paper "The Care of the Insane Before, During and After Their Confinement in Our Asylums." The paper had the following conclusions:

1. The creation of guardian societies in every country is advantageous.
2. In the same manner as societies for the protection of abandoned children, convicts, beggars and vagabonds, guardian societies must originate through private initiative, at the same time securing the moral and pecuniary support of the public authorities.
3. To have a complete organization, guardian societies should form but one division of the charitable societies for the protection of foundlings, convicts, mendicants, vagabonds and insane.
4. Every asylum for the insane should have an affiliated guardian society.
5. Guardian societies should extend their action to the person who is insane and to his family. Guardianship should be exercised before, during, and after asylum life.
6. The extension of the work of guardian societies imposes great sacrifices.
7. Every charitable person, whatever his means, must be made to take an interest in the work of guardianship. If those members who contribute a fixed sum have a voice in the general direction of the societies, others must not be excluded from that right who have the same intentions but do not occupy the same favorable financial position. The latter members may be considered as adherents to the work.

8. If a certain class of persons, by reason of their leisure and financial position, can devote themselves to the work more or less continuously, morally and materially, their help under certain conditions should be accepted even as that of all other persons who may offer their services.

9. Guardian societies cannot thoroughly carry out their work unless they are well informed concerning the duties to be performed. More or less detailed regulations would be of the greatest assistance. But the purpose would be better served by the preparation and publication of questions relating to the knowledge indispensable to helpful interference, as well in those cases where mental troubles have just been certified as in those where preventive measures should be taken to check the outbreak of the malady.

10. Guardian societies should co-operate with the public authorities every time that they meet a case of degeneration or misfortune which, with their help might be relieved.

11. Subsequent conferences should report these measures and the results obtained.

All the steps taken for the organization of after-care associations have been successful in Europe. It was at the last "Congrès des Patronages" held in Brussels in 1898, that the principle of the extension of guardian societies for the insane was accepted.

Experience in the asylums in Europe has proved that the societies, in order to give a greater scope to their charitable work must protect the insane before, during and after their confinement; that material and moral relief should be given not only to the insane person but to his family.

Benevolent people should have correct ideas about the best method of alleviating want. They should know how to prevent useless expenditure and apply means to charitable ends judiciously.

We believe in a new and not distant movement, that will secure prophylaxis and the diminution of mental disease.

There is no doubt that medical superintendents of hospitals for the insane would take pleasure in the organization of this kind of associations. They are enabled to form relations with different members of these associations and with the families of

the insane, and by their influence contribute to the success of this great work.

I will not repeat what I have said before the National Conference of Charities concerning the organization and public relief of the insane, but will consider a truly democratic basis for guardian societies, permitting the poorest as well as the wealthiest to take an active part in their prosperity. If, for example, the work done by the patients in hospitals for the insane should be arranged in such a way that a certain part of the profit might be turned into the treasury of the guardian societies, these material means, with the subscriptions of members of the societies, should be sufficient to do all necessary charitable work.

The medical staff, with the aid of members of the societies, should learn what to do to prevent insanity and to shorten and even prevent the confinement of patients, if such is possible, and what should be done with patients having left the asylum, recovered or improved.

In my opinion much good can be done by giving popular addresses upon the nature of mental disease, upon the predisposing and exciting causes of insanity, and upon preventive treatment. When these questions are understood and made known to the public, mutual aid by all means obtainable, moral as well as material, becomes possible. From this moment the insane will be considered invalids and regarded as such. They should never be treated with harshness or rudeness. They should always be approached with the greatest patience and never reproached. They should never be laughed at or offended by thoughtless looks or gestures. The subject of their condition should not be discussed in their presence and they should be kept from everything that might injure them. With these philosophic—also scientific—notions a prompt and rational treatment has commenced. Popular addresses should prepare people for their early treatment. These papers should give a clear and short description of the manner in which the existence of mental trouble can be recognized. And as people still remain distrustful in regard to hospitals for the insane, doubtful of the number of recoveries therein and unaware that recoveries are more numerous and rapid if the patient is given hospital care early in the disease, guardian societies should aim to educate the

public and combat these prejudices. It is important that people generally should take an interest in the life of the asylum and the treatment of those who are confined therein. These results can be obtained only with constant co-operation of persons of broad ideas, whose devotion will lead them to depict in lectures the sufferings and woe engendered by mental disease, the hope that may spring from an early and rational treatment, and the conditions which may contribute to recovery and prevent recurrence.

Every citizen can and should take part in this noble work. The care, the grief, the wretchedness, the idea that the disorder will bar his way to the resumption of work may drive the patient to despair. Loving sympathy should be extended to the insane and their families and interest in them aroused among the people. Guardian societies can do a great deal to remove the causes which predispose to insanity. The struggle against predisposing causes is beset with difficulties. First of all are those which lead directly to human degeneration and demand the intervention of legislative authority. Guardian societies should attempt to remove the indifference which remains with folded arms, ignoring the progress of alcoholism. Scandinavian countries for several years have been teaching that there is a possibility of decreasing not only insanity but even moral perversion, idiocy, a series of physical infirmities, and criminality—the direct consequences of degeneration—by attention to this evil.

The mission of guardian societies should go farther still. There is a class which especially demands attention because its members have inherited from their parents insufficient cerebral matter and are thus rendered incapable of occupying an honorable position in society. These must be provided with an education. Special schools for backward children already exist in the United States, Germany, England, France, and Scandinavia, but they should exist everywhere. Guardian societies can help and provide for these children and cause them to be cared for in special establishments for the feeble-minded, if they are incapable of improvement.

The insane person has an invalid brain. If the patient's disease be of recent date and if his mental trouble has developed rapidly, so much the more important is early treatment. The family and friends should know that his brain is in need of rest, that

every excitement must be kept from him, and that he must not be distressed by visits. He requires a trained physician and mental rest and it is here that intelligent and devoted members of guardian societies with well-digested ideas concerning the moral treatment of insanity may advantageously contribute aid and assist the attending physician when necessary, see that prescriptions are carried out, and inform the family concerning measures suitable to employ in behalf of the patient.

The attitude of those who surround the patient during the anxious days and hours which may precede even the first visit of the physician is of vital importance, and supervision must be constant. One intelligent and kind person may here do much good and prevent harm. Many such persons should be found in guardian societies, and their influence upon patients under home care would be excellent.

When confinement has taken place in a hospital for the insane the guardian society can continue to perform efficient work by aiding the physician and being, when necessary the interpreter between the patient and his family, visiting the patient when allowed, consoling and helping him to recovery, and contributing to the support of his needy family. The work of guardian societies contributes to diminish the length of residence in an asylum, and the States and provinces as well as the townships should understand that such societies protect the interests of the public and have a right to the most liberal material support.

I will not say anything of the after-care of patients, restored to health and returned to their families. The Medico-Psychological Association has published several good papers upon the question. The recovered patient, returning to work, should continue to be the object of peculiar care to his benefactors. They should commend him to his employer and surround him with friends. If the work supplied be not sufficiently lucrative to meet his needs they should cause the deficiency to be made good by periodical relief. In conclusion, I take pleasure in referring to the excellent paper upon this question in the *American Journal of Insanity*, 1898, page 673.

DISCUSSION.

Dr. DEWEY; This paper of our honored colleague, Dr. Morel, is very suggestive and interesting. Its range is very wide, embracing all the insane

both before, during and after their hospital residence, and almost all other classes of the dependent diseased and unfortunate.

In our own country it seems to me that more will be accomplished by concentrating effort in the one direction in which we are particularly interested; that is, in seeking to relieve the insane, and even limiting our efforts to particular circumstances under which relief seems to be specially needed. I refer to the case of the insane who are poor, who have been discharged recovered. If, after a society with this special aim has been created and well-begun its work, such society finds it expedient to extend its field of operations and aid the insane before commitment to an insane hospital as well as during their sojourn, so much the better, but with us in America the care in the hospital is already well provided for, and our people proceed upon the theory that our citizens are able to look after themselves if they have their health.

It has seemed to me that the most practical form which benevolent interest in the after-care of the insane could take, would be the creation of a society organized on the solid and enduring principles of charity organization in general, and placing in the control of such a society a tract of land for gardening and even farming, as near as possible to the large centers of population, where in very plain and simple surroundings agricultural and industrial pursuits could be maintained, which would furnish support and revenue to the needy recovered insane for definite limited periods, with a view to seeing them again started in a career of self-support.

SOME FORMS OF CEREBRAL SEIZURES IN INSANITY.

*By Irwin H. Neff, M. D.,
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Pathological findings, in cases of paretic dementia dying from the effects of a seizure, rarely show any lesion to which the seizure can be attributed.

This statement is founded upon six paretics succumbing to cerebral seizures. The morbid changes in all the cases were much the same, consisting of general atrophy of the nerve elements, disseminated cell degeneration of a granular type, some overgrowth of the connective tissue, and diffuse inflammation around and in the sheaths of the blood vessels. In one case there were minute hemorrhages scattered through the cerebral cortex. These conditions are indicative of a progressive cerebral degeneration, and only in the last case mentioned were there any signs of an acute lesion.¹

Pathologists have not yet agreed as to the primary seat of the disease, and doubtless it is for this reason that they have failed to establish a pathological basis for this common symptom.

Unquestionably the symptoms attending the paretic seizure are too often disregarded. A more thorough study of these cases, and likewise of seizures occurring incidentally during the course of any insanity, might be of material assistance in establishing a pathology for convulsive disorders. We are too often satisfied with the mere statement that a "seizure" has occurred. Frequently no observation is taken of the circumstances under which it developed, the type, or the clinical course. I have lately had opportunity of studying in detail the symptoms of

several paretic seizures. In both cases "signal symptoms" were found, and pronounced sensorial changes heralded the attacks.

We have found that the study of the epileptic seizure has been productive of good. Why should not the study of seizures connected with insanity be profitable? This question should be emphasized when we remember that in these cases autopsies are often opportune, and obtainable at a comparatively early stage.

This paper is written with the object of calling attention to some forms of cerebral seizures occurring in cases of insanity where the nature of the psychosis would preclude such a symptom.

Apoplectiform, epileptiform, vertiginous, and other forms of cerebral seizures occurring in the insane are either significant of the type of the psychosis, or are indicative of some intercurrent trouble, which may not necessarily be related to the mental disorder. The pathogenesis of such attacks is a matter of conjecture. The etiology is still more obscure when such a seizure is not related to the form of the psychosis.

As explanatory of the variance in opinions we need only to refer to the theories regarding the nature of paretic seizures. Fluctuations in brain pressure, disturbances of circulation, cortical degenerations and minute cortical hemorrhages, have been evoked as causative agents. Berkley² believes that practically "All the ordinary symptoms of general paralysis may be accounted for by the fact that there is going on in the brain a continuous and progressive alteration of the vascular walls that reduces the supply of nutriment to the minimum, and at the same time narrows the channels for the return of lymph flow, inducing at times edema of the brain substance and peculiar seizures known as epileptiform attacks." The fact that these seizures occur in the prodromal and first stages of paretic dementia would strengthen this hypothesis.

Another theory which may assist us in determining the cause of these attacks is one propounded and described by Langdon.³ He thinks that the convulsive phenomena of paretic dementia may be explained by the gradual destruction of the cortex. This produces lessened inhibition, and the cortical discharge being unrestrained, convulsive phenomena appear. The increased attention which is being given to inhibition as a causative agent in many nervous phenomena makes this theory doubly interest-

ing. The pathogenesis of apoplectic attacks resulting from cerebral hyperemia and edema, may likewise aid us. Collins⁴ says that in these conditions it is supposed that the circulatory disorder is so profound that some one or more of the levels of the intracranial motor projection system is for the time thrown out of function, but not permanently diseased. The same author thinks that the belief that the blood vessels of the brain may undergo spasmodic contraction, thus cutting off the blood supply in certain brain areas, is well sustained.

Doubtless one or more of these factors may operate at the same time. The sudden appearance, disappearance, and reappearance of such seizures would denote some vascular disturbance.

The convulsion is only a symptom, and its appearance in the insanities does not necessarily indicate epilepsy or parietic dementia. In epilepsy the convulsion is a pathognomonic symptom. In parietic dementia and in those forms of insanity in which a seizure may occur the symptom may be pathognomonic, but it is not essential for the diagnosis. In these cases a variation in type is frequently seen. For instance, in parietic dementia a variety of cerebral seizures may occur. The classification given by Bevan Lewis⁵ is perhaps the most practical. He enumerates the following forms: Syncopal attacks, petit mal, or exceptionally, grand mal, limited or unilateral twitchings, epileptiform discharges, apoplectiform or true congestive attacks, hemiplegia, monoplegia.

It is not probable that any one pathological lesion is responsible for these diverse conditions. We must therefore acknowledge that although we have here a form of insanity with demonstrable and fairly constant organic changes, we have as yet been unable to satisfactorily account for one of its principal symptoms.

Passing to the convulsive phenomena observed in elderly persons, we have more uniformity in opinion. Bastian⁶ says that after the age of forty apoplexy in its various forms may be ushered in by an epileptiform seizure, and that these seizures may occur irregularly. He also calls attention to the fact that malnutrition and degeneration, caused by intemperance, may predispose to these symptoms. Nauyn⁷ thinks that epileptiform attacks in the aged may be due to cerebral anemia, this being

directly dependent upon a weak heart, and arterio-sclerosis seen in these cases. Mahnert⁹ in describing epilepsy of arterio-sclerotic origin, says that we have a sufficient explanation for the convulsive phenomena in the heart weakness and the sclerosis of the arteries of the brain. Kellogg⁷ states that epilepsy may be an accidental intercurrent symptom in cases of insanity with embolic softening, syphilitic gummata, and other forms of organic cerebral trouble.

The following classification by Shaw,¹⁰ with few additions, is convenient for reference. Apoplecticiform attacks occurring in the insane are due to organic brain disease, pseudo-paretic dementia, paretic dementia, and alcoholic insanity. Epileptiform attacks result from paretic dementia, organic brain disease, senile dementia, alcoholic insanity, pseudo-paretic dementia certain forms of melancholia, and the varieties of toxic insanity. Vertiginous attacks develop in epileptic insanity, organic insanity, senile dementia, toxic insanity, and some forms of periodical insanity. Thus we see that several types of insanity may be productive of seizures. They may be a more or less constant symptom in paretic dementia, pseudo paretic dementia, the organic insanities, insanities from toxemia, alcoholic insanity, melancholia, and certain forms of mania. I have had under observation several convulsive seizures not of a hysterical nature, occurring in cases of acute melancholia. These seizures occurring as isolated symptoms in the acute psychoses, it would seem that we would be justified in regarding them as due to defective or perverted inhibition.

It should be remembered that a cerebral seizure occurring in the insane subject may be caused by poisonous agents introduced from without—alcohol, strychnia, etc.—by toxic substances generated in the body—uremia (Bright's disease), diabetes, etc.—by the late development of an epilepsy, or possibly the recurrence of an epileptic paroxysm after a long interval. The development of cerebral apoplexy, brain neoplasm, or some other structural brain disease, may in no way be related to the psychosis. The question of an erroneous diagnosis, and the possibility of an organic insanity engrafted on a general or complicated insanity, should be considered. Worcester¹¹ thinks that this latter condition occurs more commonly than is generally believed. These are some of the diagnostic points to be

borne in mind. In other words, such attacks as described above may be incidental to, symptomatic of, or entirely independent of, the insanity.

I have collected 23 cases where cerebral seizures of an apoplectic form and epileptiform type appeared during the progress of a psychosis not ordinarily accompanied by such a symptom. In twenty of the cases there was no apparent relation of the seizure to the mental disease. Four toxic cases, due to ingestion of a drug for therapeutic purposes, and likewise three cases, which proved to be due to parietic dementia, are excluded. Twelve of the remaining sixteen cases have been under personal observation, and have been subjected to thorough examinations. Nine of the cases are still being investigated. Ophthalmoscopic, urinary and other clinical examinations were made under varying conditions. Every effort was made to obtain symptoms of a localizing value. Autopsies have been performed in two cases, and the results bearing on the seizures have been incorporated in an abstract of the respective cases. The principal facts regarding the cases are made clear by reference to the table. For the sake of brevity the results of clinical examinations of negative value are not given, and to avoid repetition the facts given in the table are omitted in the description of the cases. As will be seen in the resumé, an attempt has been made to classify the seizures in one of the following divisions: (1) Errors in diagnosis; (2) development of late epilepsy; (3) relation of the seizures to degenerative vascular changes, viz., arterio-sclerosis, softenings, neoplasms, or other organic conditions; (4) the existence of hysteria, or some functional element; (5) the possibility of an engrafting of an organic insanity on the original form.

Case 1.—Revised diagnosis.* Organic dementia. Six seizures developed after an attack of syncope. Tonic and clonic convulsions of right arm and leg, with slight involvement of corresponding parts of left side. Deviation of head and eyes to right side. After seizure gait was hemiplegic. There has been no recurrence of seizures. Present condition: Paresis of right leg and arm, dragging of right foot. Right pupil somewhat the larger and irregular in outline, with immobility. Mental condition one of progressive dementia, with episodic attacks of excitement.

*By Revised Diagnosis is meant the diagnosis made at the time of seizure.

Case 2.—Original diagnosis sustained. Without prodromata, and without any assignable cause, two severe general epileptiform convulsions of characteristic type occurred. Mental symptoms remain unchanged. Removed one year after occurrence of seizures. There has been no return of convulsive symptoms.

Case 3.—Original diagnosis sustained. Seizure was of generalepileptiform type, followed by right hemiplegia. The effects had entirely disappeared in four weeks. Second seizure of apoplectiform type, with resulting right hemiplegia, two years afterwards. Present condition: Gait shuffling; evidence of paretic condition of left leg; left hand-grasp weakened; aortic valvular heart murmur; pupillary reflex sluggish; fine general tremor—senile. Evidence of general atheroma. Psychical condition is one of progressive mental enfeeblement.

Case 4.—Original diagnosis sustained. Three general epileptiform seizures have occurred during the past six months. Since occurrence of seizures there has been a slowly developing dementia. Neurasthenic symptoms which were present before the seizures, viz., fatigue, general hyperesthesia, restriction of visual fields, dyspeptic symptoms, cephalic sensations, were unchanged. Present examination: Fine general tremor (neurasthenic), original neurasthenic stigmata, marked symptoms of atheroma.

Case 5.—Revised diagnosis, epileptic insanity. Has had nine epileptiform seizures and several minor epileptiform attacks during the past year. The attacks of petit mal have often been followed by automatic movements. Present condition: Small bilateral enlargement of the thyroid gland, with no attendant symptoms.

Case 6.—Original diagnosis sustained. Partial epileptiform seizure. Duration five minutes, followed by confusion, continuing for two days. Six months have elapsed without a recurrence. Present condition: Bilateral dilatation of pupils.

Case 7.—Original diagnosis sustained. A severe epileptiform seizure occurred in consequence of a fall on the head following an altercation with a fellow-patient. Eight months have elapsed without a recurrence of seizure. Present condition: Patient has a small goitre.

Case 8.—Original diagnosis sustained. Two days after admission to the asylum he had an epileptiform seizure. Before

its occurrence patient was extremely agitated and apprehensive. Six months afterwards was removed from the asylum. There had been no recurrence of seizure.

Case 9.—Revised diagnosis, organic dementia. Eleven general epileptiform convulsions, without premonitory symptoms, occurred during a period of six weeks. During this time the following additional symptoms were noted: Marked disturbance of equilibrium, approaching cerebellar type; convergent strabismus of right eye, diplopia; diminished acuity of vision without change in fundus. Death resulted from pneumonia six weeks after onset of convulsive symptoms. The autopsy findings were unsatisfactory, and except indications of increased intracranial pressure, were of a negative character.

Case 10.—Original diagnosis sustained. Three convulsive attacks consisting of transitory loss of consciousness and slight convulsive movements—general—followed by automatic movements, occurring during a period of three weeks. After each attack a degree of confusion was present. Discharged nine months after their occurrence. There had been no return of convulsive symptoms.

Case 11.—Original diagnosis sustained. Two epileptiform convulsions occurred during an interval of two months, each attack followed by a period of confusion. Was in a condition of extreme maniacal excitement previous to each attack. Patient discharged three years after occurrence of seizures. No recurrence of attacks.

Case 12.—Original diagnosis sustained. An epileptiform seizure, general and of a severe type, developed without prodromata. This was followed by right hemiplegia, from which patient recovered in six weeks. Two months afterwards another epileptiform attack occurred. During the following nine years there were twelve epileptiform seizures of a severe type. At times after attacks patient would be confused. For four years preceding death there had been no recurrence of convulsive symptoms. During the four years under observation of the writer there were well-marked signs of general atheroma.

Case 13.—Revised diagnosis, organic dementia. Numerous epileptiform convulsions occurred. These were at times of the character of unilateral twitching. Pre- and post-epileptic con-

fusion occurred. Interesting sensory changes often preceded attacks. Patient died in an epileptiform seizure, 18 months after occurrence of first seizure.

At the autopsy there was found a general atrophy of the nerve elements, granular cell degeneration, and other changes characteristic of parietic dementia. There was also present a marked softening of right lateral lobe of cerebellum. This was found to be due to an obliterated endarteritis. Occlusion of many cortical arteries was found.

Case 14.—Original diagnosis sustained. Two general epileptiform seizures occurred in series, followed during the past three months by three of original type. Pre- and post-epileptic confusion. Physical examination showed dilated stomach. Microscopic examination after a test meal is corroborative of this condition.

Case 15.—Revised diagnosis epileptic insanity. Six epileptiform seizures have occurred during the past two years, with post-epileptic confusion. Present condition: Examination reveals well-pronounced signs of arterio-sclerosis.

Case 16.—Original diagnosis sustained. Patient had an apoplectic seizure, followed by right hemiplegia, with complete recovery in seven days. Examination at the time of seizure revealed pronounced indicanuria, constipation, disordered nutrition, and other signs of auto-intoxication. Eight months have elapsed without recurrence of attack.

The following analytical table is merely hypothetical, and is an attempt to give a grouping of the cases reported. Three cases, cases 6, 7 and 11, were probably due to intensity of mental excitement, and possibly mental shock. One case, case 5, was probably the late development of an idiopathic epilepsy. One case, case 14, was probably dependent upon auto-intoxication, due to gastric dilatation. One case, case 16, was perhaps due to auto-intoxication of intestinal form. Of the remaining ten cases, eight showed signs of arterio-sclerosis, which might be held accountable for the seizures. Two of these cases were perhaps related to definite organic changes. Six might be classified as epilepsy of arterio-sclerotic origin. Two cases, 1 and 13, would seem to be forms of organic psychoses engrafted on a simple insanity.

TABLE EXPLANATORY OF CASES.

No. of case.	Sex.	Age at time of seizure.	No. of seizures.	Duration of insanity at time of seizure.	Form of seizure.	Form of insanity.	Heredity.
1	Female	47	Six in series.	7 Yrs.	Epileptiform.	Mania acute.	None.
2	Female	39	Two in series.	7	....do ..	Monomania .	Paternal grandmother
3	Male ...	53	3	15	Apoplec- tiform.	Terminal de- mentia.	Unascertained.
4	Male ...	65	Two in series.	2	Epileptiform.	Melancholia acute.	None.
5	Female	37	10	7	....do	Monomania .	Brother epileptic.
6	Male ...	32	1	16	....do	Terminal de- mentia	Father, three aunts.
7	Female	25	1	8	....do ....	....do	None.
8	Female	29	1	5 mos.	....do	Melancholia acute.	do.
9	Male ...	26	11	15	....do	Periodical mania.	Paternal grandmother two brothers.
10	Female	38	3	12	....do ....	....do	Mother, uncle, aunt.
11	Female	25	2	6	....do ....	....do	None.
12	Male ...	65	4	2	....do	Melancholia acute.	do.
13	Male ...	65	4	9	....do	Terminal de- mentia.	do.
14	Male ...	48	5	2	....do ....	....do	do.
15	Male ...	75	7	10	....do ....	....do	do.
16	Male ...	48	1	18	Apoplec- tiform.	Prim. del. insanity.	Father intemperate.

Conclusions: (1) Cerebral seizures may occur in the insane under varying conditions. (2) Their causation is often obscure, and although they are frequently of diagnostic importance, they may appear in many forms of insanity as isolated symptoms. (3) The symptoms may be entirely independent of the type of the psychosis, and may in no way alter its course. (4) Autopsies on patients, succumbing to these seizures often fail to reveal any lesion which could be held accountable for the symptom. (5) It is possible to have an organic psychosis engrafted on a generalized or partial insanity.

1. Personal communication, Dr. Theophil Klingmann, Ann Arbor, Mich.
2. Henry J. Berkley: General Pathology of Mental Diseases, American Journal of Insanity, Vol. 56, No. 111, p. 462.
3. T. W. Langdon: Epilepsy and Other Convulsive Diseases, A Study in Neuro-dynamics and Pathogenesis, Journal of Nervous and Mental Diseases, Vol. 21, p. 588.

4. Joseph Collins: Treatment of Diseases of the Nervous System, p. 212.
5. Bevan Lewis: A Text-Book of Mental Diseases, p. 259.
6. H. Charlton Bastian: Quain's Dictionary of Medicine, Vol. 1, p. 401.
7. Annual of Universal Medical Sciences, Vol. 2, 1896.
8. F. Mahnert: Annual Year-Book of Medicine and Surgery, 1899.
9. Theodore H. Kellogg: Text-Book of Mental Diseases, p. 574.
10. James Shaw: Epitome of Mental Diseases.
11. William L. Worcester: American Journal of Insanity, Vol. 52, p. 821.

REFLECTIONS ON TRAUMATIC HYSTERIA.

By C. B. Burr, M. D.,

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In February of last year there was admitted to Oak Grove Hospital a young woman of whom the following history was furnished: Age 25, single, high school education, habits good, neuropathic organization. Her father was lacking in force of character and her mother had an ungoverned or ungovernable temper. She was naturally industrious, bright and amiable. She and a sister had both been subjected to ill treatment on the part of their mother and had taken refuge with an aunt. The tension off, the younger sister developed peculiar hysteria and led a dual life for two years. For months at a time she is said to have had no recollection of incidents although able to carry on her work and participate in the affairs of the household. The sister admitted to Oak Grove on one occasion visited the younger who was at that time in a state of hysterical delirium, became much affected and soon after developed similar symptoms. Attacks of mental confusion appeared. They were preceded by several months' invalidism and the first occurred at the close of a menstrual period. During the attacks she showed scanning or staccato utterance. She was accustomed to say "I-don't-know, I-don't-think-so." Attacks were ushered in by intense drowsiness from which, if yielded to, she awakened "off," as her relatives expressed it. Latterly there had been no regularity about the attacks, but they had occurred with increasing frequency. It was said that pressure on the forehead sometimes restored consciousness. She had been irritable and disrespectful and a short time before admission arose from bed and slipped out of doors at 1:30 in the morning in intensely cold weather. During her two months residence in Oak Grove she adapted

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herself to the conditions of the hospital and though critical and querulous, for the most part co-operated in treatment. She once mentioned a sensation of drowsiness but did not lose self-control. On a later occasion she complained of headache and an uncomfortable feeling in the occiput and spoke deliberately with scanning utterance. This attack was attributed to emotional causes. On the evening before she had been called to the telephone by a person with whom she preferred not to talk. She spent some time in bed the day the headache occurred, was brighter in the evening, and apparently remembered all incidents. Two months after admission she left the hospital in very good health.

A month later the invalid sister, of whom mention has heretofore been made, came under treatment. She was said to be suffering from hysteria, due to heredity, and an injury to the head from a blow from a chair in the hands of her mother. There was no evidence that this injury bore relation to the hysterical condition but she had often complained of sharp pains in its locality. In addition to the facts heretofore mentioned, it was stated that during the first attack, two years before, she came to the table clad negligently, was dull and confused, appeared drowsy, and in the evening stuporous. The same night she became delirious and appeared to be resisting and fighting her mother. She opposed attention and refused medicine. Attacks of a hysterical nature occurred from time to time afterward. During them respiration was at times almost completely suppressed but the heart's action was not affected. She assumed grotesque positions, such as hanging over the footboard of the bed with lower extremities on the bed and arms on the floor, or hips on the bed rail and shoulders and back on the floor. There were also opisthotonos and cataleptoid states. At the end of ten weeks she was much improved but her manner became entirely changed. From being amiable she grew wilful and acted in opposition to the wishes of her friends. There were attacks of grave hysteria for months afterward when suddenly a change occurred. She felt something snap in the left side of the head and appeared as if waking from sleep, inquired how she came to be upstairs and remembered going to sleep on the couch in the sitting room, an event which occurred eight months before. There appeared to be obliteration of recollection of events dur-

ing this time. A kodak which she had learned to operate very skilfully was entirely unknown to her and she appeared to be unable even to open the case which was operated by means of a concealed button. Persons with whom she had become acquainted during the period were as perfect strangers. It was impossible to convince her that it was summer season until she was taken to the window and shown that there was no snow on the ground. Occasional hysterical attacks occurred subsequently. While not confined to the menstrual period symptoms were aggravated at that time. During attacks she struck her head against the wall and it was often necessary to use force in controlling her. She tried to bite and would repeat petulantly "I will kill myself." On admission she was well nourished and her complexion good. She remained under treatment two months. During this time there was on one occasion much nervousness, muscular twitching (general, not localized), and severe headache referred to the region of injury. The pulse at that time was soft and irregular. She occasionally complained of headache afterward but on the whole improved steadily. Her conduct became girlish and romping. She took childish delight in riding on her bicycle about the grounds at high speed. There was at no time any evidence of paralysis.

It is not strange in view of the similarity in the two conditions that the second case was not taken more seriously than the first. There was no evidence of injury to the scalp or the skull, no cicatrix, no increased tenderness on percussion at the site of the alleged trauma. Apart from hospital influences she at once developed profound hysteria and a surgeon took interest in the case. With much assurance he diagnosticated meningeal or cerebral irritation at the seat of injury to the head, and with what seemed to me at the time extreme surgical boldness, trephined. The patient recovered. I was not present at the operation, but have, from an observer who is entitled to entire confidence, the following account:

"No scar was visible in the scalp. Externally the skull seemed normal. A button of bone was taken with a Galt trephine at the point where all pain was alleged to start from. There seemed to be greater thickening and density of the bone at that point than is usual. Dura mater was firmly adherent to the bone at the opening and for some distance in all directions.

Pulsation was hardly perceptible. After separating the adherent dura mater from all around the opening it was incised. It seemed very thick and vascular. There was an escape of some clear fluid and pretty free bleeding. Then there was quite noticeable pulsation. Two fine catgut sutures were used to close the wound in the dura. The scalp wound was then closed and the usual antiseptic dressings applied. I did not see the patient again until last Tuesday. She was walking about the hall and said she was feeling quite well. There has been no rise of temperature, no pain, and her mental condition is much improved. She and her friends believe that she has had a complete restoration of mental and physical health as a result of the operation. Too short a time has elapsed for me to express an opinion. That the operation has had a strong moral effect upon the patient and her friends cannot be doubted. What the ultimate results will be time will probably demonstrate."

The criticism of the hospital which followed the incident was embarrassing but we were, and still are unable to see how, in retracing our steps we could have acted differently with the light we then had. Not one symptom suggested surgical interference. We were chagrined that the value of the operation should not have been foreseen. It was, apparently, necessary, and brought about the patient's recovery, but I fear that under similar circumstances we should act as before. The case is reported to show the possibilities of surgical relief in cases of traumatic hysteria, and it occurs to me to ask two questions in connection therewith:

Given the facts as recited, could a neurologist recommend operation?

In a similar case would an operation of such magnitude be justifiable with the possibility of pathological findings and in the absence of them for its suggestive influence?

Or, in other words, could we assume the existence of disease, or failing to find it justify surgical measures because of the presumable moral effect? Or, put more briefly still, was the case scientifically operable?

ON THE CLINICAL STUDY OF PSYCHIATRY.

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The development of modern medicine is most intimately connected with the great advances made in pathological anatomy. Hence it was only in accordance with the spirit of the time that in every field of medicine decided progress was expected, mainly along this line of research. Psychiatry was affected by this spirit in a peculiar manner. Many of the best investigators directed their energy towards microscopic studies, but the conditions under which they worked differed from those existing in general medicine. Here the field had been prepared by good clinical analyses, furnished more especially by the great French clinicians. These had rendered possible the intimate relation between clinical and pathological-anatomical studies; but in psychiatry this was not the case. Moreover, the methods of pathological-anatomical study were still very imperfect. For these reasons the attention of psychiatrists came to be directed more and more towards the more promising problems of neurology, and clinical psychiatry received no new invigorating impulses. Even the attempts which were made in the right direction were not sufficiently appreciated. Only this can explain why Kahlbaum's work should have had so little influence upon the general development of psychiatry.

In recent years, however, I think we may fairly say that the general attitude is changing. Without neglecting pathological anatomy, alienists are laying more stress upon clinical psychiatry, and the studies in this subject are undertaken more from the standpoint of general pathology.

While many indications pointed to such a change in attitude, and many workers in all countries contributed towards it, we must, nevertheless, regard Kraepelin as the most aimful and consistent reformer. He has shown us lines along which work can be done to bring more clearness into the subject. He has attempted to place the study of psychiatry on a more rational basis.

Convinced of the soundness of the general tendency of his method, we have endeavored at the McLean Hospital to study mental diseases from the standpoint of general pathology. In doing this certain ideas and principles have gradually taken shape and have guided our work; and it is these which I wish to present to you.

We have heard a great deal about classification in psychiatry—more than is desirable—and yet it was natural enough that attempts should be made to group the varied conditions which presented themselves; indeed, this is necessary not only for practical purposes, but especially for purposes of study. But when we attempt to classify, we must be clear with regard to our possibilities as well as our purposes. Of the possibilities and principles we shall speak presently. So far as the object is concerned, it seems to me that the most important *raison d'être* for a tentative classification, such as we may expect at present, is its methodological purpose. We should attempt to bring together the different materials which should be studied in conjunction, that is, cases a combined study of which is calculated to advance our knowledge of the manifestations of these diseases. We see that it lies in the very purpose of the classification that it should be tentative and flexible.

Much depends, of course, upon the standpoint from which a classification is made, and the standpoint of the physician naturally differs from that of the psychologist. The physician's final aim is to arrive at diseases, while the psychologist merely seeks for deviations from normal functions. These deviations are symptoms, but not disease entities having their special cause, special course, and their special lesions and combinations of manifestations.

In the great mass of conditions which we see, the variations

in every respect are so great that we must assume different disease processes which give rise to these variations.*

But while we infer the existence of different diseases, we have little knowledge of their real processes. Indeed, such a knowledge seems to be very remote; but what are accessible to us are the manifestations of these processes with all their great variety of differences. It is just here that we are at once confronted with the greatest problem, *i. e.*, which of these differences are essential and which are not. Although general pathology and psychology furnish some data which will aid us in attacking this problem, we must admit that in the present state of our knowledge these are not sufficient and we must look for other assistance. In order to state the problem more clearly, let us take a definite example from mental disorders; for instance, a group of cases which would ordinarily be classed under melancholia. Some cases will show agitation, some retardation, some simply depression, others again other traits. In some cases the affection seems to be connected with a cause. Some show a tendency to recurrence, others show no such tendency. Some patients deteriorate, others do not, and even in the manner of deterioration differences may appear. Again, the pathological-anatomical alterations may differ, and if we should make chemical studies, perhaps, there again we might find distinctions. Here, then, are differences enough; but which of these are important and which are not? How do we know that the fact that one case of melancholia shows, let us say, inhibition, another agitation, and so forth, is at all essential; or that the fact that one deteriorates and the other does not, necessarily means that the two cases represent different diseases. Or how do we know that certain pathological-anatomical changes are possible only in one disease and not in another? On the other hand, how do we know that the most heterogeneous symptoms or disease-curves may not belong

* I am, of course, aware of the fact that we cannot speak of processes in all conditions of mental aberration; but that we are frequently dealing with developmental arrests or developmental peculiarities; indeed, it may at times be difficult to say which of these two types we have before us. The former are, however, the more frequent. Moreover, a study of them more especially forces upon us a general pathological standpoint. This paper, therefore, treats of them alone, though I do not see that the manner of study of the two should materially differ.

to the same disease, and that variations, which seem to us at first glance to be so great, for systematic purposes may not be unimportant? Thus, an excitement, a confusion, a depression, or a chronic and acute course, may well be the manifestations of the same process, and we know what possibilities lie in differences of intensity. So we see that wherever we look we are confronted with the same difficulty, namely that of deciding what is essential and what is not.

Now the conception of disease processes will come to our aid, for this alone puts before us the general pathological problem. It helps to unite all the different sides of a case into one whole, and leads us to a consideration of all the manifestations; for it is evident that if we desire to arrive at a postulated disease process, we shall not take into consideration one group only of the manifestations, and certainly not when we are convinced that our knowledge of this group is insufficient and when we do not know upon what to base our differentiations. The error of overlooking this was made, for example, in the purely psychological classifications, such as the older ones, of the diseases of the feelings and those of the intellect, as well as in a recent attempt to build up a system of psychiatry upon association psychology. The same may be said about the etiological classifications.

If, however, we take into account all the manifestations of the disease process, we are actuated by the best guiding principle that is available to us at present. We must aim at a careful analysis of the data of each group of manifestations, note distinctions and make these the object of our special study; but whether these are really essential or not, only a general study of all the manifestations will teach us. We have not sufficient reason, either of a psychological or of an anatomical nature, to recognize differences in manifestations as *a priori* essential; nor is our knowledge of cause, course and outcome adequate to this end.

To illustrate the method, let us make two large groups of cases, one ending in dementia, the other in recovery. Do these two groups also show common traits in the symptoms or in the course or cause, etc.? Perhaps we should find that this is not the case and that we can make better groups according to symptoms. When we analyze these we may find that our first large groups, based on the presence or absence of dementia, have to be subdivided

into smaller groups, which show differences in the kind of dementia. Or our study of symptoms may reveal to us well-defined pictures in cases which may or may not deteriorate. This would lead us to re-examine our conception of deterioration, to see whether, even as a special kind, it is an essential feature. If the limits of the paper allowed we might continue and bring in differences in the disease curve, or in the cause, or in the pathological-anatomical alterations; but this is hardly necessary. What I wished to indicate was the general principle, which may now be stated as follows: the postulated disease processes, we can at present only study in their manifestations. These manifestations may be divided for practical purposes into different groups, namely, the cause, the disease curve or course, the outcome, the symptom-picture, the pathological-anatomical changes, and finally, perhaps, such things as chemical alterations. The conclusions which we draw from these groups of manifestations must be allowed to influence each other according to the value which each deserves, so that the final conclusions are the result of the entire analysis.

From all that has been said the importance of clinical work to the extent indicated is apparent. Only when this is carefully conducted are we prepared for studies in pathological anatomy or pathological chemistry; and only then will all these different studies mutually support each other and lead us in an aimful manner to a clear recognition of the real diseases. For these reasons also it seems to me that the general, otherwise very creditable, movement in this country towards the establishment of laboratories in insane asylums is somewhat misguided and may do a certain amount of harm. We have been severely censured for our lack of interest in scientific questions. The establishment of a laboratory may give us the feeling that we have sufficed to all scientific needs, although the observation of the patients may be as unscientific as ever.

Having delineated the general attitude to be adopted, I purpose to speak somewhat more in detail of the different manifestations, with a view to indicating the more important features and to showing along what lines it seems possible, to a certain extent, to separate the essential from the non-essential. It is clear, however, that only a somewhat cursory treatment can be given here to this part of the subject.

We may be pardoned if, for practical purposes, we class the cause among the manifestations of the disease process. We all know how important the etiology is in the question of circumscribing diseases, for disease entities are etiological entities. In psychiatry, however, even more than in the other fields of medicine, the fact has often been overlooked that a noxious influence preceding the outbreak of a disease is not necessarily its cause. But all such influences should, nevertheless, be an object of our study, for though they may not represent essential causes themselves, they may point out the way to a clearer understanding of them, as they may be more or less closely connected with them. What we must, however, rigorously require of an essential cause is that it gave rise to a definite disease picture and that this same disease picture cannot be produced by anything else. Unless this relation of cause and effect is proven, purely etiological groups are not justifiable. From what has been said above, it is clear that by disease pictures we do not imply a certain combination of symptoms only; but conditions which our study of symptoms, course and outcome, and, if possible, pathological-anatomical lesions, show us to be consistent with each other.

On the other hand, though certain influences may prove in many cases to only favor the outbreak of various diseases without being their essential causes, yet these same influences may deserve in other cases a much greater weight or be directly essential causes. This seems true, for example, with regard to alcohol, the puerperium, and the climacterium. We cannot deny then that our knowledge of strictly essential causes is meagre; but if etiological factors are to be of assistance to us in circumscribing diseases we must be clear about their true value.

While these general remarks may suffice to indicate briefly the treatment of etiology, we must speak somewhat more at length of the course or what may be called the disease curve and the outcome. In spite of the fact that only a thorough knowledge of the disease processes with which we are dealing would furnish us with the necessary data from which to decide with certainty what is fundamental, we must nevertheless at every stage of development strive to single out those features in course and outcome which seem especially important and elementary.

To a certain extent it will be necessary to treat course and

outcome conjointly. The first conceptions regarding the disease curve which suggest themselves are those of acuteness and chronicity. In an analysis of these we shall be led to a discussion of the main points of our subject. Acute and chronic are terms which in the common usage are by no means clear or sharply defined. We speak of a disease as acute when the symptoms are very pronounced and at the same time the disorder is of a rather short duration, while we speak of a disease as chronic when the symptoms last for a long time, no matter whether they be intense or slight.

Why are these conceptions not sharp and not well adapted for our purposes? For two reasons, I think. In the first place we combine two elements in the terms—that of intensity and that of duration—sometimes laying more stress on the one, and again more on the other. In the second place, we meet here with an old fault, namely, the tendency to regard mental disorders too much from the purely symptomatic point of view, rather than from the standpoint of disease process. To make this clear by an example: When in neurology we speak of an acute anterior poliomyelitis, in spite of the persistent “chronic” symptoms of palsy, we are using the term “acute” with reference to the disease process; yet the same is often not the case in mental diseases. Here we speak of chronic melancholia or chronic paranoia in cases which just as little deserve the epithet chronic as referred to the process as does anterior poliomyelitis. On the other hand, we speak of an attack of insanity as acute, which later proves to be merely a short phase in a process showing a constant tendency to return without external reasons, as is the case in epilepsy, a disease which we unhesitatingly call chronic. While for practical purposes these inconsistencies are of little consequence, they must be avoided in an analytical study of disease processes. We see, therefore, that instead of the present conceptions acute and chronic, we need conceptions referring either to intensity or to duration, and referring either to the symptom picture or to the disease process, for we have seen that permanent symptoms may simply be the outcome of an irreparable lesion once established. These terms then lead us to a consideration of the intensity and the duration of the disease process on the one hand, and to the question of permanent alteration on the other. At present the intensity is the most diffi-

cult of these three factors to study. On the one hand we may often be doubtful about the greater or lesser intensity of symptoms, and the conclusions to be drawn therefrom as to the intensity of the disease process. On the other hand, experience teaches us that intensity varies within such wide limits in diseases which we must regard as entities, that it seems impossible as yet to state what is essential and what is not. But one point should be especially dwelt upon, namely, the fact that some attacks of insanity may be so intense as to lead to death. Such cases have been erroneously classed together under the name of *delirium acutum*. It seems that we have here a feature which is not common to all diseases; but one which probably depends not upon the intensity of the process alone, but possibly also upon its destructive character. (See below.)

By duration we mean the extent of the disease curve. We now have to decide whether there are any distinctions to be found here which are important. Arbitrary lines have sometimes been drawn between acute and chronic, when these terms were used with reference to duration. This was done for statistical purposes. But for our purposes this distinction is not only impracticable, but also inadequate. Again, in order to draw conclusions from the symptoms with regard to the process we must avoid the error of confounding signs of permanent defect with those arising from an active process. This is often impossible, and hence we must seek for criteria which avoid these difficulties. Fortunately we are not left without some aid. We find that disease processes of long duration show a decided tendency to fluctuations. These fluctuations show themselves in remissions, late exacerbations and recurrences, terms between which sharp lines cannot be drawn. Of these, general paralysis supplies us with good examples. We all know that a case of general paralysis may present a decided remission after an acute onset. The patient may recover so far as his symptoms are concerned, and such a remission may last for several years. We do not, however, say that he has recovered, because we know from experience the inevitable tendency of the disease to recur. Moreover, we encounter the same phenomenon later on in the course of the disease. A patient may have slowly deteriorated; then an exacerbation may occur, after which there may also be a remission. In this case, however, the patient is not well,

though he may return to the level on which he was before. But more than this, we not infrequently see demented patients in whom for months there is no progress. Such a condition also probably represents a real remission. Here again, then, we have to differentiate between symptoms and process, since it is probable that an arrest in process need not show itself in a diminution of symptoms, but simply in a lack of progression. The same tendency to fluctuation is seen in other diseases, as tabes, Graves' disease, chronic arthritis, epilepsy, etc., and we find, therefore, that this is a very common feature. In other disorders, when the cessation lasts longer, or when the process is not of a progressive character, we speak of recurrences. But in both cases the common trait is the tendency of the process to return without any external reason. Now it is just this tendency which appears at present to be the most important feature in the duration of the process. It is this which seems really distinctive, and whether processes lead to permanent loss or not, the tendency plainly manifests itself, either by recurrences or by exacerbations. Hence we would make the distinction between diseases which tend to recurrences and those which show no such tendency. If we wish to retain for our purpose the terms acute and chronic, it would be well to restrict their use to these conceptions.

This brings us to the last of the three elements included in the terms acute and chronic, as they are commonly used, namely, the tendency of a disease process to lead to irreparable defect. This has nothing to do with the tendency to recurrence or with the intensity of the process. For we see on the one hand, disease processes constantly reappearing for years without leaving behind any signs of deterioration; while in other cases even mild attacks may leave the patient permanently and seriously damaged. Hence, we conclude that this tendency is a special characteristic of some disease processes, while it is not associated with others, and that it is independent of the other factors of which we have spoken. We will call this the destructive character of the disease process. Hence we find, for example, that the process of general paralysis is at once chronic in our sense and destructive—chronic because it shows constant fluctuations and tendency to recurrence; destructive because it leads

to permanent alterations. These two elements combined produce progressiveness.

But we must not forget that we are dealing with processes which probably differ widely in nature, and therefore, while these factors are undoubtedly of some importance, we must yet learn their modifications and the real laws which govern them in different diseases. The cases will have to teach us how long remissions may last and whether their extent differs in destructive and non-destructive processes; whether recurrences are in all diseases as inevitable, as in general paralysis, or whether there are diseases which in most cases, though not in all, may show the tendency to recurrence; and finally whether the destructive character necessarily shows itself after the first lighting up of the process, or whether one or more so-called attacks may pass over before it becomes manifest. Thus it seems probable that not so much the inevitable reappearance of a process as the general tendency to reappearance is characteristic of a group of cases which show otherwise common features, and that the general essential tendency to dementia is characteristic rather than the inevitable dementia after the first attack. All these questions will have to be settled by a correlative study of other manifestations in long series of cases. But the nucleus of a group of cases must naturally be formed by examples which show such features in a much more schematic manner. It was in this way that the conception of circular insanity, for example, led to the present conception of manic-depressive insanity, the evolution of which is one of the most brilliant achievements of the Heidelberg school.

We have spoken in a general way of dementia, understood in its clinical sense as irreparable defect. We shall now speak of dementia in its psychological sense. We see different varieties of dementia. These may represent differences in degree or differences in nature. The dementia of the advanced paralytic, for example, presents a picture different from that of the early stages. May not the same simple differences in degree exist in all varieties? Of course this question can only be answered after we have found out whether these differences in dementia agree with differences in other respects, and whether special disease-pictures always lead to one and the same form of dementia in which, irrespective of degree, certain elements exist and

others are wanting. If that is so, the study of the terminal stages represents an important field for our work. The outcome is then not only important so far as the tendency to deterioration, but so far as the kind of deterioration is concerned. I think that in a general way this qualitative difference actually exists, and consequently a study of the symptom-picture of the states of permanent defect will be of great assistance to us in the attempt to circumscribe diseases. The common outcome into a clearly analyzed form of dementia may perhaps show us that clinical pictures which still appear to us to differ, in reality belong together. It seems to me that we have here a fruitful field for experimental study, for a careful analysis by means of tests of the elements which make up these states of deterioration. This is especially feasible, since often enough we find patients with mild degrees of dementia well adapted for such study.

Unquestionably the most important manifestations are the mental symptoms, and they of course deserve the most accurate study; but the difficulty in distinguishing between the essential and the non-essential is even more apparent in this than in any other group of manifestations. It is well to say at once that the attempt to make this distinction on the basis of normal psychology has not been successful. Thirty years ago Kahlbaum pointed this out, and although the psychology of to-day differs from the psychology of that time, what he said then is, nevertheless, still true. While then it seems impossible at present on the basis of normal psychology alone to arrive at fundamental symptoms, and while we cannot even be sure whether different diseases have necessarily fundamentally different symptoms, it appears wisest to proceed entirely by induction. It will be necessary to establish differences between superficially similar symptoms and syndromes, differences which have to be further and further analyzed and reduced to finer distinctions. In this work the results of studies in normal psychology will of course be of the greatest assistance to us; but it cannot be too strongly insisted that to make any system of psychology, in its present stage of development, the basis of our studies is likely to lead us astray. The psychiatrist must furnish his own problems, in the elaboration of which the data and the methods of normal psychology, as well as his own methods and his own results and experience, must be used. Moreover, it must never be forgotten that the

very changes which we are studying are themselves qualified to throw much light upon many obscure questions of psychology. If this more independent course be taken, psychiatry will be of much greater service to psychology, and the mutual dependence of the two studies will be established on a much more reasonable basis. Not aprioristic psychological notions, but studies on patients, will have to point out the way—they will have to teach us what to look for and what are the laws which govern the symptoms. To make the method perfectly clear, it is perhaps best to place ourselves on an entirely objective standpoint. Let us assume that we know nothing about clinical pictures as they have been described, and let us ask ourselves how we should set about analyzing the complex pictures which we see. We would have to begin with a description of each patient, noting first the more striking features, such as his general behavior, the changes presented in his motor sphere, in general motion as well as in speech. We should further describe his ability or inability to understand our questions or his surroundings, the character of his speech with regard to coherence or incoherence, his reaction to outside stimuli, the presence or absence of false ideas, the changes in the emotional sphere, etc. Such a description would represent the outline of the picture in broad strokes as it were. Now suppose that we have done this; we would then find that our descriptions were insufficient and that it would be necessary to add finer traits, more delicate features. Thus it would be found that it is not enough to say that a patient is depressed or exhilarated, shows motor excitement or motor retardation, that he has delusions or hears voices, or that he is incoherent in his talk, etc.; but that we can add finer traits and nicer discriminations which give a special cast to these symptoms. In doing this we have arrived at a more accurate description; our attention has been called to features which in succeeding cases we shall look for and which will become objects of our study. So it would be with every portion of our description. This very study will stimulate us to develop means by which we can bring out more clearly certain characteristics. It will raise new problems and lead to inquiries especially directed towards them. But as we are not studying mental symptoms from a purely psychological, but from a general pathological, point of view, regarding them as manifestation of disease processes, we will

constantly compare differences in them with differences in other manifestations. It is this comparison which will draw our attention more or less towards certain symptomatic differences. In this way it has been found that hallucinations, delusions, depression, excitement, confusion, etc., are by no means symptoms or symptom-groups which are in any way distinctive, and the same might be said with regard to other and still finer traits. On the other hand, such symptoms or symptom-groups as memory defect, psychomotor retardation, negativism, automatisms, disorientation, flight of ideas, verbigeration, autochthonous ideas and the like, are of much greater importance. These are symptoms, none of which should be regarded as pathognomonic—a word which in the psychiatry of the present day does not exist—but they are at least more essential than the others above mentioned. They are relatively fundamental symptoms. Such symptoms we must attempt to characterize clearly. The next step is to discover the laws governing them, their possible modifications and the conditions under which such modifications occur. What we have said above in discussing the differences in the symptom-pictures of the various forms of dementia may be repeated here for the active symptoms. In both these fields there is opportunity for experimental study, or, better, for the experimental method, a method by which, in a more microscopic manner, as it were, finer distinctions can be more accurately studied and fixed.

Thus far we have dwelt very little on the subject of combinations of symptoms. And yet it is clear that when we are dealing with a complicated mechanism with intricately connected and interdependent functions, the study of the combinations of traits will be of the greatest importance in order to characterize the deviations from the normal. We have learned by experience that superficial similarities may be produced by fundamentally different alterations. Hence even our relatively fundamental symptoms still need the additional characterization of the combinations in which they occur to make them more distinctive. Moreover, if we find two relatively fundamental symptoms invariably associated, this very association will lead the way to a deeper understanding of their nature. And finally the study of the combinations of symptoms will guard us from a *too* schematic conception of symptoms. Just as the whole plan of

work, which we have advocated, forces us to take into consideration the whole disease picture in all its aspects, so will this tend to make us consider not mental symptoms, but the entire mental picture. We are thus endeavoring to discover definite symptoms and symptom-complexes, and to study these in their modifications and relations, and are thus uniting clinical pictures which superficially may differ, while we separate others which may be superficially alike. In other words, we are attempting to formulate the psychological principles of the mental pictures. We must admit, however, the possibility that further studies of symptoms may show us essential relations between pictures which at present may appear to have nothing to do with each other. Or two dissimilar pictures may be found in the same patient at different times. The fact that they exist in the same patient would lead us to inquire whether they are not the outcome of the same process, though we may not be able to understand the relationship psychologically. Again, the study of many cases may by gradual transitions between various pictures show us relations which before were not clear to us. At any rate, important as fundamental relations between symptom-pictures are, their dissimilarity, even in essential traits, does not exclude *a priori* the possibility of their being the outcome of the same disease process. Finally, it will be necessary to return for a moment to the doubt which exists as to whether different diseases have necessarily fundamentally different symptoms. Symptoms may differ according to the localization of the process in this or that functional group of nerve-elements, or according to the intensity of the process. Again, there may be still other possibilities in the process itself of which we have at present but little conception. With regard to localization, it may be that some disease processes are by nature limited to certain functional groups of nerve-elements, while others may have no such boundaries. The latter seems to be the case in general paralysis. But it is difficult at present to speculate on these questions, and only further study, here especially of an anatomical nature, will bring the necessary light. I think it is evident that we gain by a study of symptoms in conjunction with the other manifestations not only scientific data, but also important practical aid towards the development of a diagnosis and a prognosis.

We have not mentioned the physical symptoms, among which are included chemical alterations, alterations in the blood, etc. These are very important, but we need not dwell on them here, as it is evident that they all have to be studied in the same manner as the mental symptoms and that the data which we gain in these studies should be analyzed and adapted to our purposes in the same spirit in which all the manifestations dealt with are used in the general scheme of our work.

It is not within the scope of this paper to speak at length of the pathological-anatomical lesions. The outlook as regards the obtaining of valuable findings in this field seems at present more favorable than ever before; but even here we must remember that the lesions after death represent only one group of manifestations of the disease process and that our studies of them are only of real value when they are combined with careful clinical observations. Only as these mutually assist each other will they lead us to a recognition of diseases.

It is a difficult matter to sum up principles when we are dealing with things not yet elaborated and to find in a short address the *via media* between the fault of bringing too much detail and too many illustrations and that of stating things too concisely. Owing to the character of this paper, I have been forced to confine myself to stating the standpoint instead of discussing it at length. I have no doubt laid myself open to many criticisms. In one point I ask your forbearance. It would have been desirable to stand objectively above the whole matter, yet from the very nature of the subject it was inevitable that ideas suggested by the work itself, though as yet unelaborated, should exert their influence. If I have been able to make myself sufficiently clear to stimulate others to earnest work in clinical psychiatry, my purpose is achieved. What I have attempted, then, has been to outline a general working plan and not to develop a classification. The classification which we adopt is not final, but tentative; it merely represents our present state of development. Our conceptions are bound to alter as we go on, as we are able to enter more deeply into the differences within the different groups of manifestations and are able to analyze them and discover the laws which govern them. But this is not a disadvantage; on the contrary, this conservatism with regard to final questions seems to me of the greatest importance.

DISCUSSION.

Dr. HENRY M. HURD: We owe a debt to Dr. Hoch for showing us that the real way to study mental disease is to study it as we study other physical diseases. I think that the debt, as he said, which we owe to Louis, the great French physician, in the early part of this century, for showing us how to study disease clinically resembles closely that which we may sometime owe to these gentlemen for their investigations into mental disease. It seems to me essential always to bear in mind that in dealing with mental disease we are dealing with a diseased condition which follows certain laws and runs a definite course. We may not be able to agree as to what to name it but it is our duty as physicians to follow it in its manifestations. Those who were present last year and heard the admirable paper of Dr. Cowles know the gratifying outcome of such study. The attempt should be made to study pathological conditions in connection with clinical conditions. The two cannot be divorced. Clinical observations must precede pathological work.

Dr. RUNGE: I would like to say a few words in regard to two papers. Upon the inspiration received last year from Dr. Cowles' paper I have since looked into this work and I think I have really a different conception of the work from that I had then. It is always gratifying when you see some big man come out and corroborate what you have, in your small way, thought out. As the members of the Association may remember, two years ago I wrote a paper on the "Scientific Borderline Between Sanity and Insanity," and I see now my opinion is corroborated. Kraepelin starts out with insanity by infection. The old fashioned view of discriminating between so-called symptomatic and genuine insanity has been happily abandoned. Kraepelin includes acute alcoholism, or rather, inebriation or plain drunk, among manifestations of insanity. Then, as to the points Dr. Hoch has brought out, I think they are probably the strongest that can be produced in favor of the clinical methods of investigation. Last year we were not agreed on the word clinical. The only difference is that Dr. Hoch gives a very much broader meaning to the word than I do. The word "clinical" in its original meaning may be used to mean any study of the patient, such for example as the examination of the blood. But if I inject some of the blood into an animal then the observation is not entirely clinical. I have not gone deeply enough into Kraepelin's work to formulate a final opinion, but I would like to have Dr. Hoch state whether I am mistaken or not in the statement that the classification evolved by Kraepelin is of importance chiefly because it enables us to make a valuable prognosis. The division into dementia præcox, etc., is more valuable from a prognostic than from a scientific point of view. I was very much pleased to hear the Doctor mention normal psychology. Take, for instance, a simple case of indigestion, how would we know that the stomach was out of order unless we knew the normal physiology of the stomach? We could not know that it was at fault unless we knew the normal state and action of the stomach. We may know that there is some abnormal condition in the stomach, as a hyperacidity or subacidity, or some

change in its peptonizing ability, but we could not know the pathology unless we knew what is normal. The gentlemen are to-day using clinical methods of the highest class, but they are just as far as ever from the real goal in investigating the true nature of insanity. We must determine first what is normal. To-day the diagnosis of tuberculosis or typhoid fever gives complete scientific satisfaction because we know the disease-producing agents and the true nature of the disease.

REPORT OF A CASE OF MYXCEDEMAL INSANITY.

By H. E. Schmid, M. D.,

Consultant St. Vincent's Retreat for the Insane, Harrison, N. Y.

Dr. Swepson J. Brooks, who is the resident physician of St. Vincent's Retreat for the Insane, with which I have been connected since its organization, deserves the sole credit for the very full notes furnished me for the case I am about to report, namely, one of myxedemal insanity.

His thorough study and close observation of the patient are plainly discernible. I think it worthy of publication because it shows the progressive nature of the disease more clearly than any I have seen, and illustrates it more fully than the most minute description found in text-books.

Miss A. F., 21 years of age, was admitted to St. Vincent's Retreat, December 11, 1898, suffering from an acute insanity, the diagnosis being either acute mental deterioration or melancholia attonita. Two years prior to her entrance into the Retreat, a gas main exploded within a few feet of her just as she was leaving her home for a walk. Soon after this, and evidently because of it, she became rather nervous and irregular in her menstrual periods. She lost some of her color but at the same time grew somewhat stouter.

Six months before coming to St. Vincent's she entered a commercial school and studied very hard. For a while all went well, but finally she told her family that one of the teachers annoyed her a great deal by keeping his eyes upon her constantly, and that she was certain he was trying to gain an hypnotic influence over her. She also declared that the other pupils made fun of her. These ideas she kept up with varying degrees of intensity all the time she was at that school.

When however the acute symptoms appeared, they developed suddenly. One night three weeks before she came to the Retreat she was reading a newspaper when she was seized with a paroxysm of laughter, apparently causeless, and for which she could assign no reason. Upon being strongly urged to explain she threw down the paper and rushed up to her room and went to bed. Next morning she appeared much perturbed and said she had had a frightful dream, and felt sure that something terrible was going to happen while she was under a spell and could not prevent it. Then she went to church but, returning, refused to enter the house because evil spirits were in it, and a priest must be sent for to bless it. A priest was called, who finally induced her to come into the house, telling her the spirits had been exorcised. She remained indoors, however, only a little while, then grasped a crucifix and, holding it before her, ran to the priest's house. After she had been brought home, a physician was called in. To him she gave no answer to any of his questions, but steadily repeated over and over again, "I have heard it all before up at the college, painted on the walls, everywhere." She slept but little that night. The following two days she lay in bed constantly blessing herself. After this she became absolutely mute, not answering a single question. On two occasions she wrote down her wants but afterwards could not be induced to do even this. For a week she took food, but only for a week. Then she had to be fed through a nurse-tube. The last two days at home she would frequently rush to a window as though she meant to jump out of it. Later, when recovered, she declared she had no desire to do so, but thought a dove was outside and she wished to let it come in.

On admission, the patient had more the appearance of profound dementia than anything else. She sat motionless, with eyes closed, answering no questions and heeding no commands addressed to her. Her face was very pale and expressionless. Her lips were red and thick, tongue was heavily coated, breath offensive. Her bowels had not moved for four days. She would walk if taken by the hand, but with a slow and halting motion. Her temperature was 98, pulse 80. The heart's action was feeble with a far-away sound. The expansion of the chest was feeble, but all organs apparently normal. A purgative was

ordered for her the first night, followed by quinine and muriatic acid twice daily.

Eight days after her entrance the patient had to be fed by the stomach tube. In this way she absorbed three times daily one and one-half pints of milk, two eggs and two ounces of sugar. She now paid no attention to the calls of nature; remained mute except the uttering of a few ejaculations of disapproval when something was being done for her. The eyes were kept closed, but she had been seen to look around the room furtively when she thought nobody was observing her. Blood examination by the hæmatokrit showed 28% red cells, and urinary analysis was negative, save a diminution of solids. Therefore quinine and muriatic acid were stopped, and tincture of the chloride of iron in rapidly increasing doses substituted.

On December 30th the patient spoke, saying that she "felt bad all day." For the first time she answered questions, and after great urgings took a cup of beef tea. On January 2, 1899, she spoke a good deal, came out of her room and walked around the hall, though her gait was slow and labored, with her feet far apart. She opened her eyes and made several attempts to eat. She was quite emotional, walking up to one of the inmates and asking forgiveness for giving so much trouble. Then she would cry, and ask to be allowed to go to her room and sit down because she was so tired. On January 6th she appeared to be waking up more. Now she took of her own volition a glass of milk. On January 7th she took all her meals without the tube, but said she did not sleep; for which she received 15 grains of sulphonal at supper time. She still soils herself and has a very offensive breath. On January 12th the iron was stopped and sulphur with sugar of milk was given. She took her food fairly well and slept fairly well but she was still very dull. Cold spray was ordered every morning for her spine, and at intervals a calomel purge administered.

On January 19th blood examination showed 30% red cells. Sulphur and milk sugar were stopped, and the iron again administered with columbo and strychnine. She reacted well to cold showering, and was kept out doors as much as possible. Her weight was 104 pounds on February 14th. She was doing fairly well; talked more and walked better. The cold shower was discontinued, and the strychnine and iron increased. On

February 18th she soiled herself again, not having done it for some days; her weight was 115 pounds. On February 24th she was not so well, showing more stupidity and less inclination to walk or to talk, and preferring to be alone. She would however smile when spoken to. Her breath was very offensive, the whole body in fact seeming to exhale a death-like odor. She looked stouter, with lips very red, in striking contrast to the waxy pallor of the face. Her last medication was now stopped and syrup of the hypophosphites given before meals, and a pill of sulphite of soda, salicylic acid and nux vomica after meals. The drip-sheet and pack were now ordered tentatively. On February 25th she was one and one-half hours in pack, but did not perspire and came out depressed. On March 7th her condition was not at all satisfactory. She grew more stupid, and as it was hard to make her swallow pills, whiskey, creosote and peppermint water were substituted for the last medicines. This improved the odor of her breath, but she soiled herself almost constantly again. On March 9th she had a severe paroxysm of crying, and appeared much distressed. When asked for the cause of it, she would look at the questioner and say, "Oh, you know!" Finally, she exclaimed in a broken-hearted way, "O, my Lord Jesus! what is the matter with Him!"

On March 14th she had been noisy all the previous night, calling out that she was the Holy Ghost. She refused all food and said that the Holy Ghost does not eat. If she were asked if she were the Holy Ghost, nothing could elicit an answer. She was growing still stouter, and with this progressed a steady deterioration of her mental faculties. When she did not indulge in the above cries of proclaiming herself the Holy Ghost, she was perfectly passive. Her heart sounds were now scarcely audible, her hair falling out largely and her breath more offensive than ever. Blood examination showed 34% red cells and solids of urine only half the normal amount. Nitro-glycerine and peptomangan ordered.

March 15th, noisy all last night, and food refused. She had to be fed with a spoon and appeared in great mental distress. She said the twelve Apostles appeared to her last night. March 19th, the tongue was found heavily coated and the breath highly offensive. Lavage of the stomach every morning, for a week, was ordered. March 28th, she menstruated for the first time

since her admission. April 11th, her condition very bad. She had to be fed with a spoon. She will stand around for hours with her shoulders humped up and her head bowed, never speaking of her own volition, and presenting an attitude of the most profound mental and physical degradation. Her fæces or urine are passed without regard to time or place.

May 12th finds the patient more miserable than ever. She cannot be made to walk, but has to be pushed along. All her joints appear to be wooden; her hair falls out still more; her finger nails are cracked and very brittle; her menstrual periods now recur every two weeks or ten days, even with more profuse flow, and she presents a spectacle of almost complete mental annihilation. Gallic acid and extract of ergot were ordered. On May 20th creosote and peptomangan were stopped, and arsenauro given in place of them, but on May 25th this was also discontinued, and thyroid gland ordered once daily. On June 6th two glands were directed to be eaten. These also produced no visible change. She passed a large quantity of red urine, which, with the guaiac test, gave reaction for blood, with some albumin, but no cells were found by microscope. On June 7th the urine was not so red, but gave the same reaction. On June 9th it was clear. On June 15th she began taking three thyroid glands daily, and yet no change in her condition was visible, but after she had continued this increased dose for twelve days, she began to look a little better, though her menstruation was still excessive. On July 11th she began to walk of her own accord, and perspired upon exerting herself. She also talked and ate some food voluntarily. Thereupon six thyroids were eaten by her daily. By August 6th she showed great improvement, took quite a long walk daily, talked a great deal and ate well. Her hair did not fall out as much as formerly, and her whole body grew thinner, markedly so her face; weight 110 pounds. On August 10th she wrote a letter home asking her relatives to come to see her. On September 4th she still continues improving; her step has become elastic, and life is again enjoyed by her. Her menstruation has become normal. She takes long walks and returns from them thoroughly happy. But concerning her sickness she is very reticent, and allusion to it is very painful to her.

September 20th, she shows improvement every day. Her cheeks are showing color again and the former ptosis with transverse corrugation of the forehead has vanished. On October 15th she went home on parole in fine mental condition. She returned November 16th, showing herself perfectly well and was discharged as recovered. The latter part of December, however, she was readmitted with a return of her trouble, when thyroid treatment again gave the happiest results, so that she has remained perfectly well ever since.

The first mention of the association between myxœdema and insanity was made by Dr. Savage in the *Journal of Mental Science* in 1880. The peculiarities of temper and disposition of which he speaks as developing gradually into acute or chronic mania, melancholia or dementia, find an apt illustration in Miss F.'s case. This was also characterized by her sensitiveness, which resulted from her being conscious of her altered appearance, and from her suspicion that she had become an object of aversion, as well as by great outbursts of violence, ending in dementia with great physical weakness.

In the several cases of myxœdema not ending in insanity, which have come under my notice, the disease shows itself generally first in the face, then in fingers and toes, hands and feet, wrists and ankles to the knee-joint. In the face, the nose is first affected, next the cheeks, the lips, the eyelids and the forehead. The nose swells and then looks club-like. The cheeks appear as if covered with a transparent coating. The lips grow coarser in form, the upper one looking often pale or yellowish pale. Their curves are lost. The eyelids are thickened. A marked preference seems to exist for attacking the left side of the body. At first the symptoms are not lasting, but disappear temporarily for a day or so, but the oftener they return the more they leave behind them organic changes, till the disease is fully and lastingly established.

It will be seen in following the symptoms of this case, that the fact is again made evident that nervous causes are in many instances active in the first beginning of this terrible disease, and the neurotic are generally affected with blood of insufficient hemoglobin.

MEMORIAL NOTICES.

CHARLES INSLEE PARDEE, M. D.

By A. E. Macdonald, M. D.

Prof. Charles Inslee Pardee, M. D., died suddenly of heart disease at his residence in the City of New York on November 3, 1899. Professor Pardee was elected to membership in the Medico-Psychological Association because of his connection with the Consulting Board of Physicians and Surgeons of the Manhattan State Hospital. He was an original member of this body, having been appointed at the time of its organization in 1879, and served continuously as its secretary from the time of its organization until his death. He was, at the time of his death, 61 years of age and leaves a widow, but no children, surviving him. He was a native of the State of New York, and a graduate of the Medical Department of the University of the City of New York. Following his graduation in 1860, he served throughout the civil war as a surgeon and achieved distinction in the service, and was, at the time of his death, a member of the Loyal Legion.

Dr. Pardee became Professor of Otology of the college from which he graduated and was, for twenty-five years, Dean of the Medical Faculty of the University of the City of New York. He was a member of the New York Academy of Medicine and of several other medical societies, and had rendered valuable and efficient service in connection with other hospitals as well as that above mentioned.

MEMORIAL IN HONOR OF ABRAM HARMAN WITMER.

When useful men in any department of human activity close their labors upon earth, it is fitting that those who survive should not only recognize the direction, and control of an All-Wise, though often mysterious Providence, but should likewise make record of deeds of philanthropy and heroism, men no longer with us have done, in their lives, for the relief of human suffering.

Wherefore the Board of Trustees of the Government Hospital for the Insane, upon the demise of Dr. Abram Harman Witmer, first assistant physician, following so closely upon the death of the former superintendent, the lamented Dr. William Whitney Godding, desire now, and here, to make record of their esteem of this most capable and faithful officer, and their sense of the great loss the Hospital has sustained.

Dr. Abram Harman Witmer was of Quaker descent, and was born on his father's farm in Lancaster county, Pennsylvania, April 10, 1845. He was the son of Abram Witmer, and Susan Newcomer Witmer, and was the youngest of five children. He began his education in the local academy of that district, and subsequently pursued his studies under a private tutor, and in the academy at Wilmington, Delaware. Choosing the medical profession, he entered upon the study of medicine at a very early age, and went to Mt. Joy, a small town in Pennsylvania, and placed himself under Dr. Benjamin H. Musser, who became his preceptor in the year 1863. In the autumn of the same year, he went to Philadelphia and attended his first course of medical lectures, having matriculated in the class at Jefferson Medical College. He graduated in medicine at this college in March, 1866—before he attained the age of 21 years—and for a year afterwards remained at the college as a private quiz mas-

ter, later becoming demonstrator of anatomy in the same school, which position he occupied for five years, leaving it to become demonstrator of anatomy in the medical department of the University of Pennsylvania. In 1870, Dr. Witmer was appointed resident physician in the department for the insane in the Philadelphia alms-house, where, as an assistant to Dr. D. D. Richardson, he remained for a number of years.

September 11, 1876, Dr. Charles H. Nichols, superintendent of the Government Hospital for the Insane, appointed Dr. Witmer to the position of third assistant physician, and, from this date, until the time of his death, January 18, 1900, he remained an officer of this institution, where, year by year, he grew in the confidence and respect of all of his associates, and of the public at large. During the administration of Dr. Godding, who was Dr. Nichols' successor, as superintendent of St. Elizabeth, Dr. Witmer became first assistant physician, and was not only closely associated with him, but implicitly trusted by him, always assuming the responsibility of acting superintendent, during the necessary absence of the superintendent from the hospital.

October 30, 1884, Dr. Witmer was married to Roberta King Stone, daughter of Mr. William J. Stone, Jr., of Washington, D. C. Two children were the fruit of this marriage, George Stone Witmer, now 14 years of age, and Harman Witmer, a lovely boy, who died when about two years of age.

February 14, 1891, Dr. Witmer was elected Professor of Mental Diseases in Georgetown College, which chair he held until the time of his death.

He was also a member of the Medical Society of the District of Columbia; of the Medical Association of the District of Columbia; of the American Medical Association; of the American Medico-Psychological Association, and of the National Geographic Society.

On the death of Dr. Godding, this board at once turned to Dr. Witmer as the fitting man to assume the administration of the hospital, and to carry forward the work which had so suddenly dropped from the hands of the learned chief. Upon the recommendation of this board, Dr. Witmer was appointed acting superintendent, and became a heavily bonded officer, who was most favorably received by the government officials, with

whom he had to do, and, for a period of about six months, or until our present superintendent, Dr. A. B. Richardson, assumed his duties. Dr. Witmer, with his long experience and thorough knowledge of the needs of the hospital, rendered an arduous service most creditable to himself, and acceptable and satisfactory to all.

The physical strain of this service proved very great to him, and soon after resigning the duties of acting superintendent, the prostration of his final illness commenced. Everything known to medical science was done to promote his recovery, and he was surrounded by competent physicians and nurses, who ministered to his every want. The disease had progressed too far to be arrested, and the recovery that had been so earnestly looked for by family and friends did not come. He slowly failed in bodily strength and finally expired January 18, 1900.

Wherefore, by this Board of Visitors of the Government Hospital for the Insane, be it

Resolved, That in the decease of Dr. Witmer we feel the deepest sense of loss to the hospital, to the public and to ourselves. For twenty-three years he was a devoted officer of the institution—faithful, earnest, genial, sympathetic, ever ready and equal to its increasing requirements—often relieving his chief of the charge of the administration, and when called upon to assume the whole burden of responsibility, showing an energy and capacity which finally exhausted his physical powers, and hastened the causes which terminated his life.

Resolved, That we here bear witness to his professional ability, experience and integrity, which have placed him in the distinguished rank so freely accorded him by his associates, by the medical and legal professions, and by the general community where he was so well and widely known, and that we shall cherish his memory as of one whose name and fame reflect great honor on the cause he served so well. To us who have, year by year, observed his devotion and fidelity, and to whom his warm greeting was ever tendered, there will be a vacant place, a vanished form, a voice now hushed forever, as we tread the halls of St. Elizabeth and think of those now gone.

Resolved, That we extend to his devoted wife, herself so long a resident in the hospital, where her son was born, and so long an ardent friend of the institution, where for her so many sacred memories must cluster for the years to come, the assurance of our deep regret and heart-felt sympathy, and commend herself and her child to the merciful kindness of the great All-Father.

Resolved, That a copy of this action be engrossed and sent to Mrs. Witmer, a copy sent to the local press, and that it shall likewise be spread on the minutes of this meeting.

CHARLES C. EASTMAN, M. D.

By Charles G. Wagner, M. D.

Dr. Charles Carroll Eastman, first assistant physician at the Binghamton State Hospital, Binghamton, N. Y., died April 12, 1900, at the age of fifty-nine years. His death was the result of chronic Bright's disease complicated with cardiac insufficiency. Although for several years prior to his death Dr. Eastman had not been in robust health he was able to perform his duties at the hospital until March 12, 1900, when he relinquished all work and did not again leave the cottage where he resided with his wife until the end of his life.

Dr. Eastman was born in the village of Owego, N. Y., February 3, 1841, and was educated in the public schools of that village and at Hobart College in Geneva, N. Y. He was the second son of Dr. Hiram Newton Eastman, and one of nine children, five of whom, three brothers and two sisters, survive him. His father was for many years Professor of *Materia Medica* in the old Geneva Medical College, at Geneva, N. Y., where the son obtained his medical education and was graduated in 1866. His mother, Mary Guyon Curtis, came of a Quaker family, but both of his parents were active workers in the Episcopal church, of which the son was also a member.

For a short period after obtaining his medical degree Dr. Eastman engaged in teaching and as principal of the Academy in East Bloomfield, N. Y., he prepared many students for college. His services were so highly valued in that community that he was urgently besought to continue his labors there as a teacher when he felt called upon to begin his life work in the practice of medicine. It was while teaching in East Bloomfield that he met Miss Mary Gould Sears of that place, who became his wife October 9, 1867. To them one child was born in Athens, Pa., in 1869, a daughter who lived but nine years. To fill the place made vacant by her death he took an adopted child into his own

home and lavished upon her an affection that could not have been exceeded had she been of his own flesh and blood.

Dr. Eastman practiced medicine for several years in Athens, Pa., in partnership with Dr. Ezra P. Allen. He then removed to Geneva, and afterward to Owego, in both of which places he was associated in practice with his father. In 1881 he was selected by the board of managers of the newly organized asylum for the chronic insane at Binghamton, N. Y., for the responsible post of first assistant physician, a position which he filled with conspicuous ability and fidelity until his last illness compelled him to lay aside his professional work. During his nineteen years of official connection with the institution it grew from a small crude asylum, for a few chronic cases sent to it from the overflowing wards of the other asylums of the State, into a large, thoroughly equipped hospital, where nearly 1,400 patients are cared for in all stages and forms of disease. At every step of advancement made in the hospital development Dr. Eastman's steadfast, loyal and strong support was of inestimable value to the managers and to the superintendent, and his unvarying kindness to the unfortunates to whom he was called upon to minister was a never-failing source of comfort to them and to their friends. His interest and zeal for their welfare was unflagging, indeed, it can scarcely be doubted that had he been less mindful of the comforts and needs of others and more considerate of himself the fatal malady which arrested his course, while he was yet in the prime of life, would have been postponed materially.

Notwithstanding the constant demands upon his time and energies, in his special work of caring for the insane, Dr. Eastman found time to read the new books and the medical journals to keep in touch with the important advances made in general medicine, and to take an active interest in the numerous medical societies of which he was a member. Possessed of a genial personality, a lively appreciation of the humorous and unswerving integrity he made friends easily and rarely lost them through any fault of his. His patients regarded him with affection and the employees of the hospital found in him a friend always considerate of their interests and anxious to help them. By his death the hospital lost a faithful officer and the State an honest, painstaking servant.

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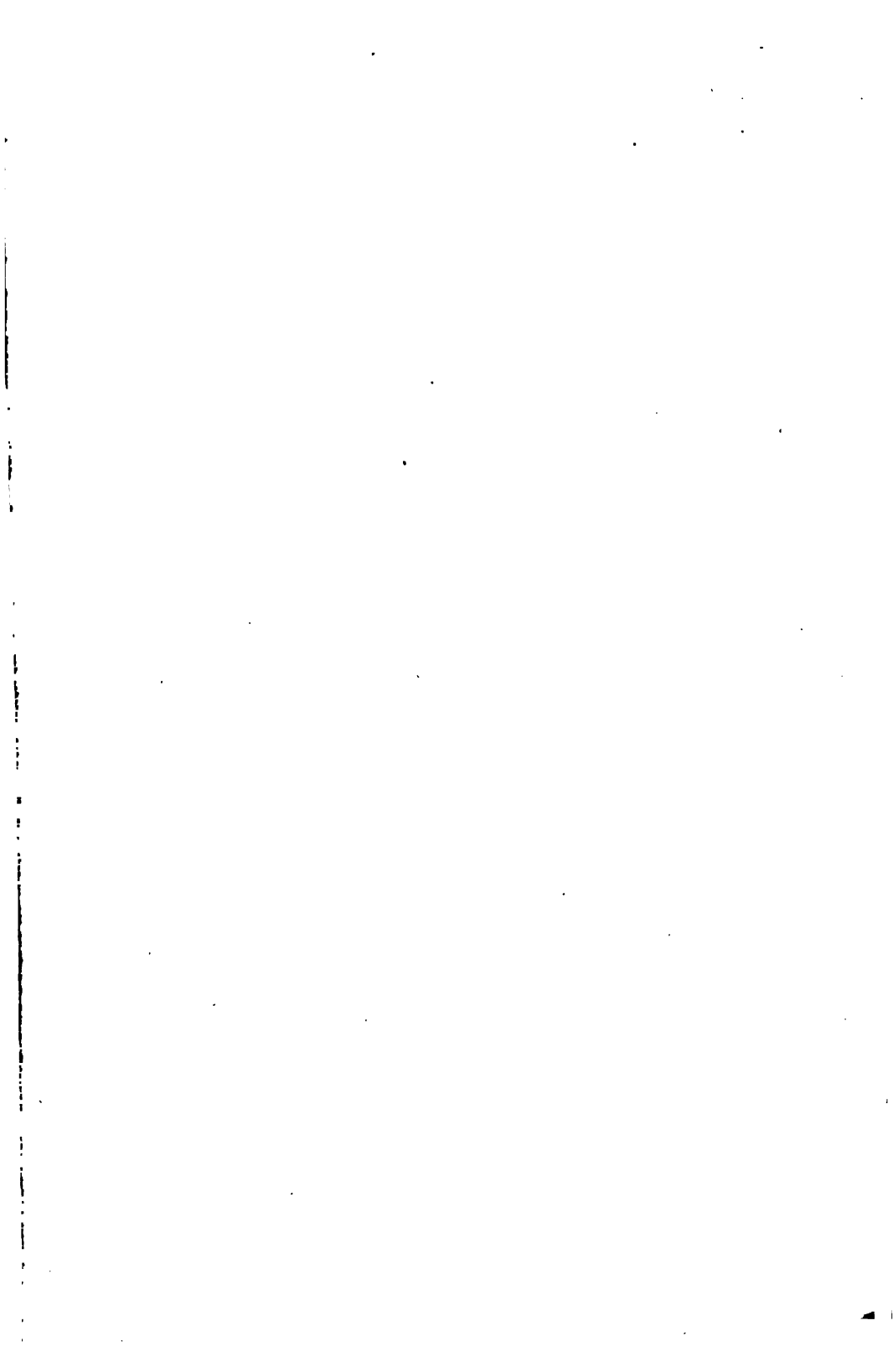
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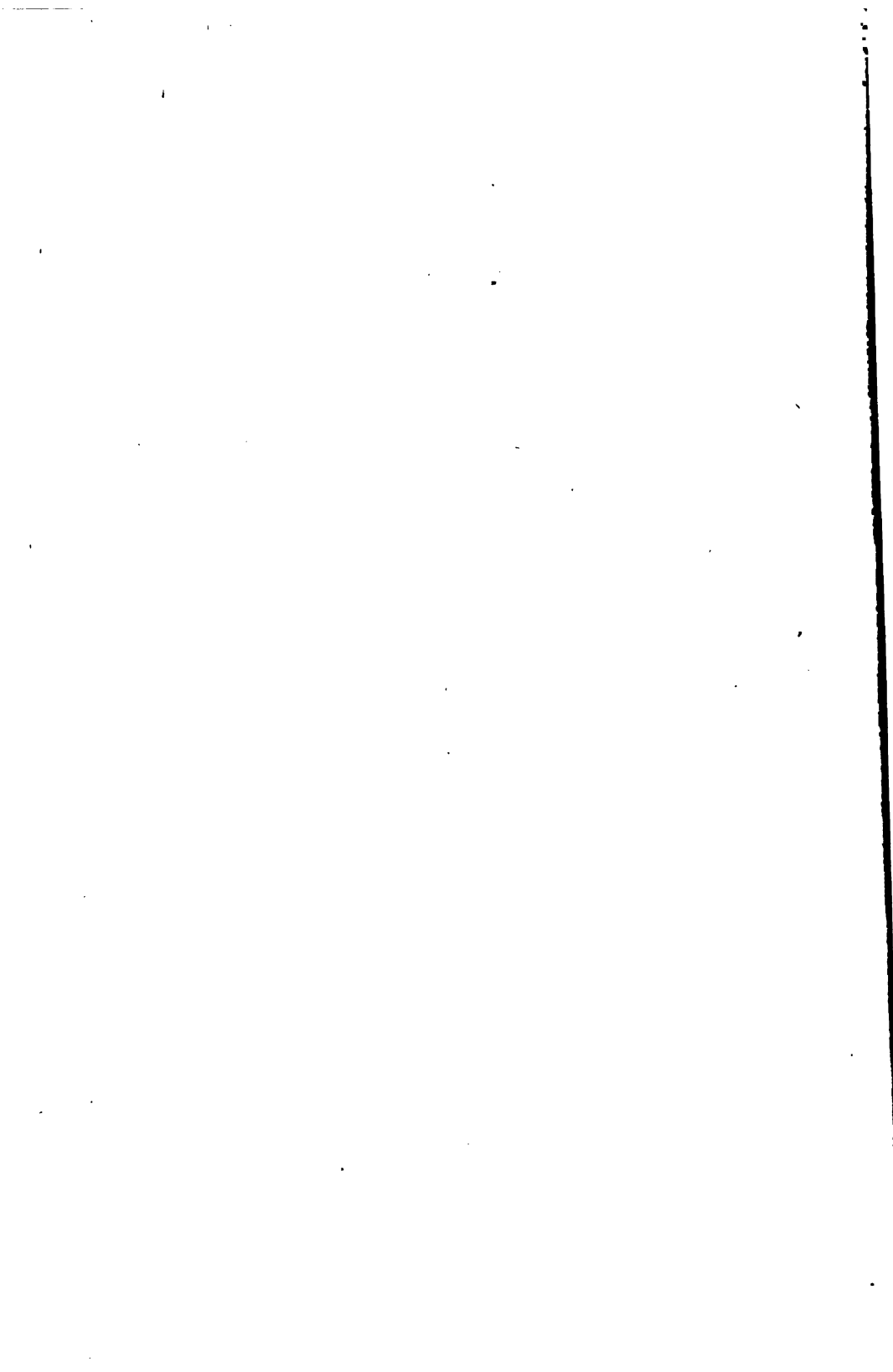
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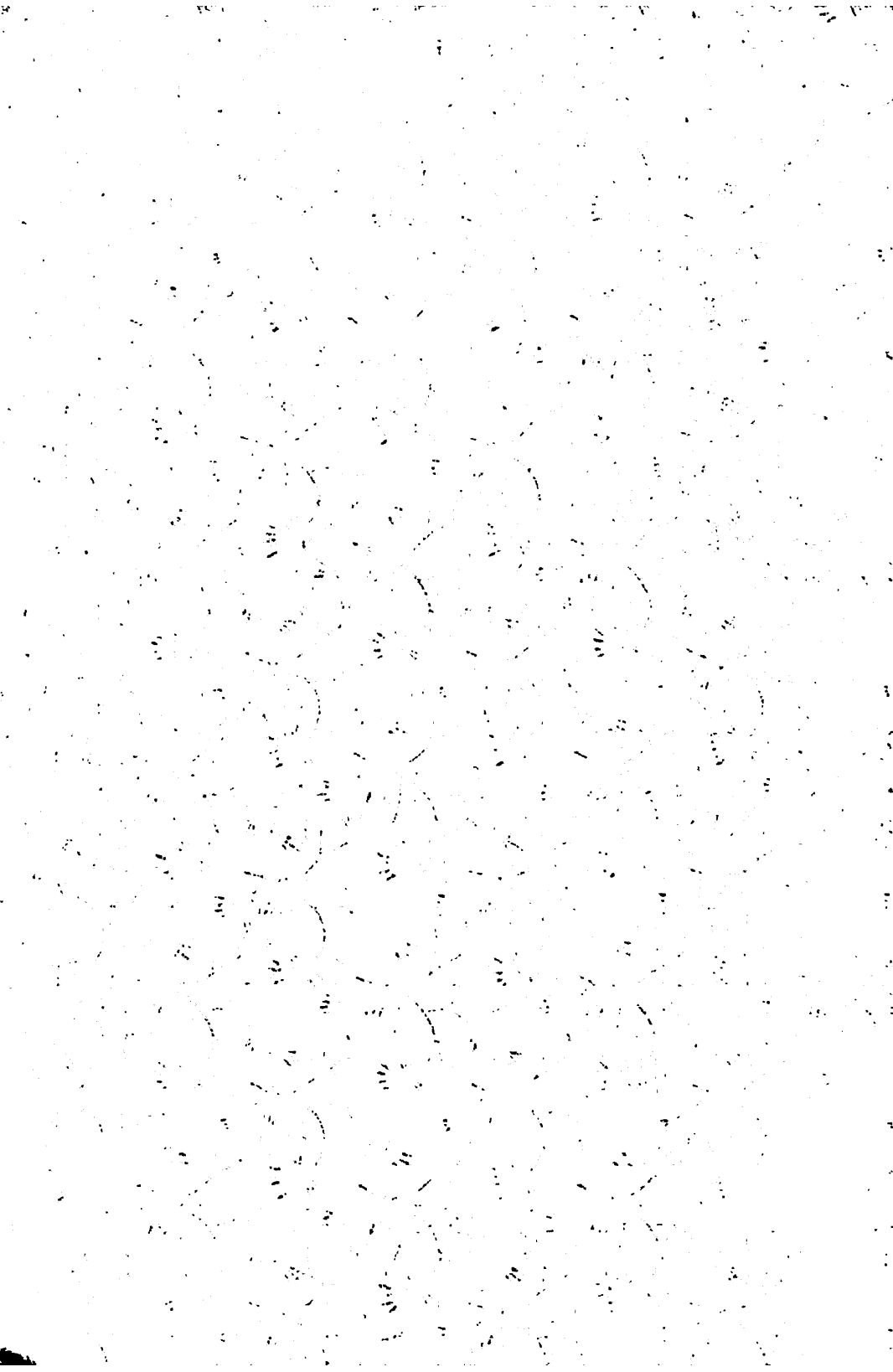












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